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DELINEATION OF THE GLAZE SEAM IN WEST WALL OF FORMER GLAZE BASIN LENOX CHINA, POMONA, NEW JERSEY EPA ID. NO. NJD 002 325 074

4/92

CA92 - April 1992

Prepared for

Lenox China
Pomona, New Jersey

Prepared by

Geraghty & Miller, Inc.
201 West Passaic Street
Rochelle Park, New Jersey 07662
(201) 909-0700

DELINEATION OF THE GLAZE SEAM
IN WEST WALL OF
FORMER GLAZE BASIN
LENOX CHINA, POMONA, NEW JERSEY
EPA ID. NO. NJD 002 325 074

April 6, 1992

Geraghty & Miller, Inc. is submitting this report to Lenox China for work performed at the Pomona, New Jersey site. The report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedure to ensure that the report meets the highest standards in terms of the methods used and the information presented. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Respectfully submitted,

GERAGHTY & MILLER, INC.

Jorge Gomez
Staff Scientist

Catherine L. Eby
Senior Scientist/Project Manager

Bruce S. McClellan
Project Director/Project Officer

JG:rma:cmw

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DELINEATION OF THE GLAZE SEAM IN WEST WALL OF FORMER GLAZE BASIN LENOX CHINA, POMONA, NEW JERSEY EPA ID. NO. NJD 002 325 074

INTRODUCTION

Geraghty & Miller, Inc. was retained by Lenox China to conduct a soil sampling investigation in the vicinity of the west wall of the former Glaze Basin of the Pomona, New Jersey manufacturing plant. This action is part of the RCRA Facility Investigation (RFI) work plan submitted to the USEPA in July 1990. A glaze seam identified within the west wall of the former Glaze Basin was termed the "Waste Pile" and designated as a Solid Waste Management Unit (SWMU) in the RCRA Facility Assessment issued by the United States Environmental Protection Agency in July 1989. The purpose of this investigation was to evaluate the nature and extent of the glaze seam and its impact on the subsoil.

BACKGROUND

During excavation of the Glaze Basin in the summer of 1988, a seam of white clayey material ranging in thickness from 6 to 12 inches and approximately 15 feet long was observed by Geraghty & Miller personnel in the west wall of the former Glaze Basin (Figure 1). A sample of the seam was collected on July 22, 1988 at the time of the Glaze Basin cleanup and closure activities. As described in the Geraghty & Miller, September 1, 1988, letter report to Kenneth Siet of the New Jersey Department of Environmental Protection and Energy (NJDEPE), this sample of the seam material was analyzed to determine if the material was glaze. The sample had a total lead concentration of 110,000 milligrams per kilogram (mg/kg), which is equivalent to 11 percent of the sample mass. Although this value is less than the 35 to 40 percent concentrations previously reported for known glaze samples taken from the Glaze Basin before it was cleaned out, the 11 percent concentration indicates that this seam had a substantial glaze content. The material also had the distinctive appearance of glaze. Following the removal of all wastes from the Glaze

Basin, a steel plate was installed along the west wall of the excavation to separate the clean backfill from the seam of waste.

The origin of the seam became apparent after the recent discovery of a facility drawing from 1953 that shows the existence of an antecedent Glaze Basin (first Glaze Basin) with the dimensions of 70 by 70 by 4 feet deep. The first Glaze Basin partially overlaps with, and was located somewhat closer to the main plant building than, the second Glaze Basin, which was excavated and backfilled in 1988. According to plant employees, when the building was expanded in 1964 toward the first Glaze Basin, a pit was excavated adjacent to the first Glaze Basin (on the side opposite from the building), and the glaze wastes were pushed into this pit. Evidently, the seam represents remnants of the first Glaze Basin. The locations of these two Glaze Basins are shown on Figure 2. The area of the first Glaze Basin that does not coincide with the second Glaze Basin is approximately 4,900 square feet.

INVESTIGATION METHODOLOGY

SOIL BORINGS

On May 2, 1991, five soil borings were installed at the locations proposed in the RFI work plan as shown on Figure 2. The soil borings were installed by driving a split-spoon sampler with a cat-head. The work was performed by Absecon Electric Motor Works of Absecon, New Jersey. Soil samples were collected from directly beneath the asphalt parking lot to a depth of 7 feet below ground surface (bgs). The Geraghty & Miller hydrogeologist examined the soil samples for the presence of glaze-like material. Geologic logs of the soil borings are included in Appendix A.

COLLECTION OF SAMPLES FOR ANALYSIS

Samples were selected for collection and analysis based on the presence of the glaze waste, a material easily distinguished from natural soils by its color and fine texture. Only

one soil boring, SB-1, showed evidence of glaze waste, and two samples from this boring were collected for analysis. Soil boring SB-1 was located approximately 12 feet from the west wall of the former Glaze Basin, where the seam had initially been observed. A composite glaze waste sample was collected from the 3.5 to 5.5 feet sampling interval, specifically, from three thin layers of glaze waste at depths of 4.1, 4.7 and 5.5 feet bgs. The thin layers of glaze waste were less than 1 inch in thickness. A subsoil sample was collected for analysis from 1.0 foot below the lowermost glaze remnant, at a depth of 6.5 feet bgs. The glaze waste sample was designated as SB-1(G) and the subsoil sample was designated as SB-1(S). The samples were placed inside the laboratory-prepared sample bottles using a stainless-steel trowel.

The split spoons and the stainless-steel trowel were cleaned prior to each use according to the decontamination procedures specified in the work plan, which included a detergent wash and a 10 percent nitric acid rinse. After collection of soil samples, a field equipment blank was prepared by running laboratory-supplied deionized water over the sampling equipment and collecting the water in the laboratory-supplied sample bottles. The glaze waste sample, the subsoil sample, and the equipment blank sample were placed inside a chilled cooler.

The glaze waste, subsoil, and field equipment blank samples were analyzed for total lead and total zinc. Analysis of the samples was performed by Enseco East laboratory of Somerset, New Jersey, certified in the State of New Jersey.

LABORATORY RESULTS

The analytical results confirm that the white clay material is glaze waste, with concentrations of 82,400 mg/kg of lead and 15,600 mg/kg of zinc. The lead concentration in the subsoil sample was 255 mg/kg, and the zinc concentration in the subsoil sample was 362 mg/kg. These values are well below the proposed NJDEPE soil cleanup standards for industrial sites: 600 mg/kg for lead and 1,500 mg/kg for zinc (NJDEPE 1992). A summary

of the laboratory results is presented in Table 1. The laboratory data sheets, including full Contract Laboratory Program (CLP) deliverables, are presented in Appendix B.

GROUND-WATER QUALITY

Geraghty & Miller reviewed the available information for lead and zinc concentrations in the ground water downgradient of the seam to evaluate the potential impact of the glaze remnants on ground-water quality. Monitoring Well MW-3 is located downgradient of the former Glaze Basin and the glaze seam. Historical data from Monitoring Well MW-3 indicate that lead has been below the 0.05 mg/L drinking water standard in 29 of 31 analyses. The only exceedences were 0.06 mg/L in July 1984 and 0.34 mg/L in October 1987. Zinc has been measured in Monitoring Well MW-3 a total of nine times between August 1988 and August 1990. Three values were above the 5 mg/L secondary drinking-water standard (6.46 mg/L in February 1990, 9.6 mg/L in May 1990, and 8.3 mg/L in August 1990). The concentrations of zinc in ground-water samples collected from all of the site NJPDES monitoring wells during February, May, and August 1990 are summarized in Table 2, and the concentrations of zinc in Monitoring Well MW-3 from August 1988 through August 1990 are summarized in Table 3.

CONCLUSIONS

Remnants of the first Glaze Basin wastes were observed in one of the five soil borings. This boring (SB-1) is located inside the footprint of the first Glaze Basin, approximately 12 feet due west from the waste seam observed during the 1988 excavation. The remnant glaze waste in this boring consists of thin discontinuous layers/lenses of white clayey material. It is not known whether these layers/lenses are connected to the waste seam. Based on the data available, the area of the glaze waste is approximately 15 feet by 12 feet, but it could be somewhat greater. The material appears to be feathering out towards the plant building; it has a thickness of between 6 and 12 inches at the edge of the

waste seam, occurs as layers less than 1-inch thick at Boring SB-1, and was not present at Boring SB-4.

The soil directly underlying the glaze waste has not been significantly impacted by metals found in the glaze waste. The ground water in Monitoring Well MW-3, located immediately downgradient from the Glaze Basins, has not been impacted by lead in the glaze waste. It is not known why the zinc concentration in MW-3 began to increase in February 1990, since the Glaze Basin has been functionally closed since 1988. Zinc has not been detected in any other site monitoring wells above the 5 mg/L secondary drinking-water standard, indicating that elevated levels of zinc in ground water are limited to the immediate vicinity of the Glaze Basin. Given that zinc does not have a primary drinking-water standard, that the impact appears to be limited in area, and that the ground surface at the Glaze Basin is covered with asphalt, the only action proposed for this SWMU is to maintain the asphalt cover at a slope that prevents accumulation of surface water and repair any cracks that develop. This should minimize the infiltration of rain water into the soil, which, in turn, should minimize any leaching from the remnants of the glaze waste.

REFERENCE

New Jersey Department of Environmental Protection and Energy. 1992. Cleanup Standards for Contaminated Sites, Proposed New Rules: N.J.A.C. 7:26D, New Jersey Register, February 3, 1992.

#NJ11716/Glazesea.rpt

Table 1. Summary of Laboratory Results for the Glaze Waste and Subsoil Samples Collected on May 2, 1991, Lenox China, Pomona, New Jersey.

Sample ID	Sample Matrix	Lead (mg/kg)	Zinc (mg/kg)	Lead (ug/L)	Zinc (ug/L)
SB-1(G)	Waste	82,400	15,600	NA	NA
SB-1(S)	Soil	255	362	NA	NA
Field Equipment Blank	Water	NA	NA	21.7 U	15.3 B

mg/kg Milligrams per kilogram.

ug/L Micrograms per liter.

U Analyte was not detected at the specified detection limit.

B Value between the instrument detection limit and the contract-required detection limit.

NA Not applicable.

All samples were analyzed by Enseco East of Somerset, New Jersey.

#NJ11716/Glazesea.rpt

Table 2. Summary of Zinc Concentrations Detected in Ground-Water Samples Collected in February, May, and August 1990 (in milligrams/liter), Lenox China, Pomona, New Jersey.

Monitoring Well No.	February	May	August
1	ND	ND	0.02
3	6.46	9.6	8.3
4	ND	0.012	ND/0.02
6	ND	0.015	0.021
7	ND	ND	0.013
8	ND	ND	0.014
9	ND	ND	ND
10	0.047	0.011	0.021

NJ11716/GLAZESEA.RPT

Table 3. Summary of Zinc Concentrations Detected in Monitoring Well MW-3 from August 1988 Through August 1990 (in milligrams/liter), Lenox China, Pomona, New Jersey.

Date	Concentration
8/88	2.0
11/88	0.926
2/89	2.7
5/89	1.36
8/89	3.18
11/89	3.25
2/90	6.46
5/90	9.6
8/90	8.3

NJ11716/GLAZESEA.RPT

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NJ11716/GLAZESEA.RPT

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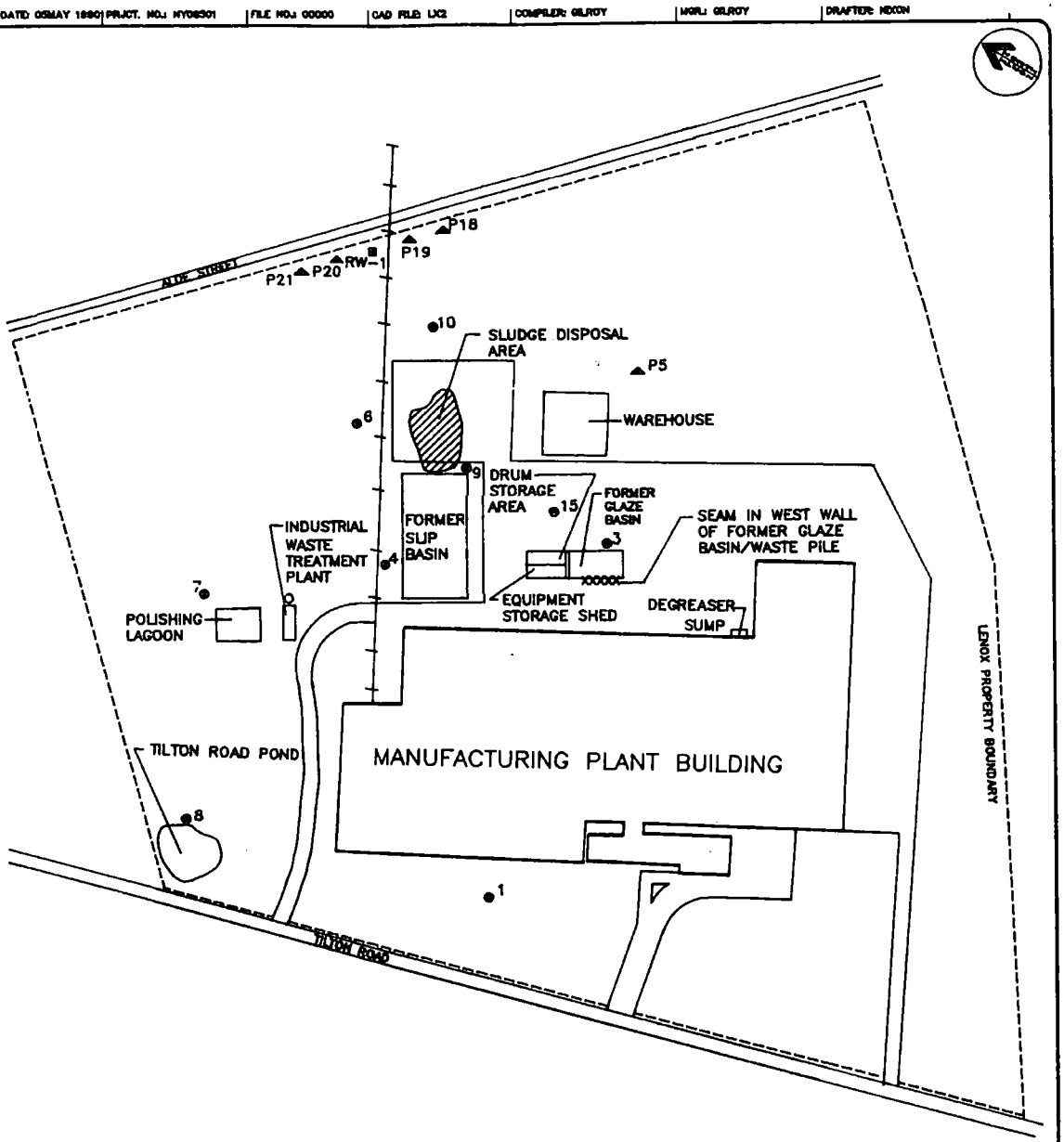
2/90	6.46
5/90	9.6
8/90	8.3

NJ11716/GLAZESEA.RPT

FIGURES

DATE: 05MAY 1990	PROJ. NO.: HY08301	FILE NO.: 00000	CAD FILE: LX2	COMPILER: GILROY	MOD.: GILROY	DRAFTER: NIXON



EXPLANATION

- ●1 LOCATION AND DESIGNATION OF MONITORING WELL
- ■ RW-1 LOCATION AND DESIGNATION OF RECOVERY WELL
- ▲ P18 LOCATION AND DESIGNATION OF PIEZOMETER

0 SCALE 300 FEET

GERAGHTY & MILLER, INC.
Environmental Services

FACILITY MAP

LENOX CHINA, POMONA, NEW JERSEY

FIGURE 1

8/-/14

DWG DATE: 15JULY1991 | PROJCT NO.: NY08208 | FILE NO.: - | DRAWING: LEN-PL | CHECKED: GOMEZ | APPROVED: GILROY | DRAFTER: NIXON

AREA OF SECOND GLAZE BASIN

APPROXIMATE LOCATION OF SEAM IN WEST WALL OF FORMER GLAZE BASIN

3

SB-2

SB-3

SB-1

SB-5

AREA OF FIRST GLAZE BASIN AS SHOWN ON 1953 PLOT PLAN

SB-4

N

EXISTING PLANT BUILDING

ORIGINAL PLANT BUILDING AS SHOWN ON 1953 PLOT PLAN

SCALE

0 100

EXPLANATION

SB-1 APPROXIMATE LOCATION OF SOIL BORING

3 LOCATION OF MONITORING WELL 3

GERAGHTY & MILLER, INC.
Environmental Services

LOCATIONS OF SOIL BORINGS INSTALLED IN THE AREA OF THE GLAZE SEAM ALONG THE WEST WALL OF THE FORMER GLAZE BASIN, MAY 2, 1991

LENOX CHINA
POMONA, NEW JERSEY

FIGURE
2

APPENDIX A

GEOLOGIC LOGS

APPENDIX A

GEOLOGIC LOGS

LENOX CHINA, POMONA, NEW JERSEY

Boring ID	Description	Depth below ground surface (Feet)
SB-1	Asphalt	0 - 0.3
	Silt, with trace of sand, fine to medium, trace of gravel, fine to coarse. Brown, soft, dry.	0.3 - 2.0
	Silt, with little sand, fine to coarse, trace of gravel, coarse, less than 1-inch thick layers of glaze at 4.1, 4.7, and 5.3 feet below ground surface.	2.0 - 5.5
	Sand, fine to medium, with trace of gravel, fine. Light gray, soft, wet.	5.5 - 7.0
SB-2	Asphalt	0 - 0.3
	Silt, with little sand, fine to coarse, trace of gravel, medium to coarse. Brown, soft, dry.	0.3 - 2.0
	Silt, with trace of sand, fine to coarse, trace of gravel, fine. Brown to dark brown, dry, soft.	2.0 - 3.5
	Silt, with little sand, fine to coarse, little gravel, fine, broken pieces of quartz. Light brown, loose, dry.	3.5 - 5.3
	Sand, fine to coarse, with little silt, trace of gravel, fine. Light brown and gray, loose, wet.	5.3 - 7.0

APPENDIX A

GEOLOGIC LOGS (Continued)

LENOX CHINA, POMONA, NEW JERSEY

Boring ID	Description	Depth below ground surface (Feet)
SB-3	Asphalt	0 - 0.4
	Silt, with little sand, fine to coarse, trace of gravel, fine to medium. Brown, soft, dry. At 1.1 feet below surface, 2-inch of fill: sand, silt, and pieces of wood.	0.4 - 3.5
	Sand, fine to coarse with trace of silt, trace of gravel, fine. Light brown, loose, moist.	3.5 - 5.5
	Sand, fine to coarse, with little silt, trace of clay. Light brown, loose, wet.	5.5 - 7.0
SB-4	Asphalt	0 - 0.3
	Silt, with trace of sand, fine to medium, trace of gravel, fine to medium. Brown, soft to medium firm, dry.	0.3 - 5.5
	Silt, with little sand, fine to coarse, trace of gravel, fine. Brown medium firm, moist.	5.5 - 7.0
SB-5	Asphalt	0 - 0.3
	Silt, with little sand, fine, trace of gravel, fine to coarse. Dark brown and black, medium firm, dry.	0.3 - 2.0

APPENDIX A

GEOLOGIC LOGS (Continued)

LENOX CHINA, POMONA, NEW JERSEY

Boring ID	Description	Depth below ground surface (Feet)
SB-5	Silt with little sand, fine to coarse, trace of gravel, fine to medium. Tan and brown, medium firm, dry.	2.0 - 3.5
	Silt, and sand, fine to medium, trace of gravel, fine to medium, trace of clay. Light brown, soft, moist.	3.5 - 5.5
	Sand, fine to coarse, with trace of gravel, fine, trace of silt. Light brown, loose, wet.	5.5 - 7.0

NJ11716disc/NY08226/Glazesea.rpt

APPENDIX B

APPENDIX B

LABORATORY DATA SHEETS

Enseco
A CORNING Company

Data Package
for Geraghty & Miller, Inc.
Enseco-East Project No. 13637

Enseco Incorporated
2200 Cottontail Lane
Somerset, NJ 08875
201/469-5800 Fax: 201/469-7516

Enseco
A CORNING Company

MAY 22, 1991

Ms. Catherine L. Gilroy
Geraghty & Miller, Inc.
201 West Passaic Street
Rochelle Park, NJ 07662

Dear Ms. Gilroy:

Enclosed are the results of the analyses performed on the two soil samples and one aqueous sample from Glaze Seam, Lenox China Site (Enseco-East Project No. 13637; Purchase Order No. LTO #11356). These samples were received under chain of custody at Enseco-East Laboratory on May 6, 1991. A brief description of the Quality Assurance/Quality Control and method references employed by Enseco is contained within the report. This letter authorizes the release of the analytical results and should be considered an integral part of this report.

Please refer to this project by the Enseco-East Laboratory Project Number to help expedite any future discussions. We will be happy to answer any questions or concerns that you may have.

Sincerely,

ENSECO-EAST LABORATORY

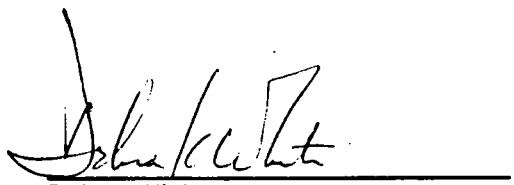
Donald McDowell

Don McDowell
Program Administrator

Enc.
sm

Enseco Incorporated
2200 Cottontail Lane
Somerset, New Jersey 08875
201/469-5800 Fax: 201/469-7516

I certify that this data package is in compliance with the terms and conditions of the analyses requested, both technically and for completeness, for other than the conditions outlined in the case narrative. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or a designated representative, as verified by the following signature.



Debra White
Inorganics Laboratory Director

QUALITY ASSURANCE/QUALITY CONTROL

To ensure data quality, an extensive QA/QC program has been implemented at Enseco-East which incorporates the following controls (as applicable).

Reagent or analytical blanks are analyzed to assess the level of contamination which exists in the analytical system. An analytical blank, analyzed with every batch of samples, consists of reagents specific to the method. This blank is carried through every aspect of the procedure, including preparation, cleanup, and analysis. Ideally, the concentration of an analyte in the blank is below the reporting limit for that analyte. However, some common laboratory solvents and metals are difficult to eliminate to the part-per-billion levels commonly reported in environmental analyses.

Duplicate Control Samples (DCS) are used to monitor the laboratory's day-to-day performance of routine analytical methods. A DCS consists of a standard, control matrix which is spiked with a group of target compounds representative of the method analytes. The DCS is analyzed with environmental samples to provide evidence that the laboratory is performing the method within accepted QC guidelines.

A DCS has been established for most routine analytical methods. Reagent water is used as the control matrix for the analysis of aqueous samples. The DCS compounds are spiked into reagent water and carried through the appropriate steps of the analysis. As stated in SW-846 (third edition), a universal blank matrix does not exist for solid samples and therefore no matrix is used. The DCS for solid samples consists of the appropriate steps of the analysis. The data thus obtained are used to set the DCS control limits. The control limits for accuracy are based on the historical average recovery of the DCS plus or minus three standard deviation units. The control limits for precision are based on the historical relative percent difference (RPD) and range from zero (no difference between duplicate samples) to the average RPD plus three standard deviation units.

Surrogates are organic compounds that are similar to the analytes of interest in chemical behavior but which are not normally found in environmental samples. Surrogates are routinely added to samples requiring GC/MS analysis to monitor the effect of the matrix on the accuracy of the analysis. Results are reported in terms of percent recovery.

ANALYTICAL RESULTS

The method number provided on each data report sheet refers to a publication originating from a regulatory or standard-setting organization. In general, the methods employed are those specified by the U.S. Environmental Protection Agency and other state and federal agencies. In cases where an approved regulatory method does not exist, a method developed by Enseco will be employed to meet the specific needs of the client. The methods commonly employed by Enseco are based on methods from the following references.

U.S. Environmental Protection Agency. Methods for Chemical Analysis of Water and Wastes. EPA-600/4-79-020. Cincinnati, OH, March 1983.

U.S. Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. (SW-846); Washington, D.C. April 1984.

U.S. Environmental Protection Agency Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. Cincinnati, OH, September 1986.

Guidelines Establishing Test Procedures for the analysis of Pollutants Under the Clean Water Act, 40 CFR, Part 136; Federal Register, (1984).

American Public Health Association, American Water Works Association, Water Pollution Control Federation. Standard Methods for the Examination of Water and Wastewater, 16th edition. Washington, D.C., April 1985.

EPA Contract Laboratory Program (CLP) protocols for the analysis of organic and inorganic hazardous substances.

II. SAMPLE DATA PACKAGE

SAMPLE DESCRIPTION INFORMATION
for
Geraghty & Miller, Inc

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
013637-0001-SA	SB-1(G)	SOLID	02 MAY 91	10:10	03 MAY 91
013637-0002-SA	SB-1(S)	SOLID	02 MAY 91	10:10	03 MAY 91
013637-0004-FB	FIELD EQUIP	AQUEOUS	02 MAY 91	12:15	03 MAY 91

CASE NARRATIVE

Enseco
A Corning Company

Case Narrative for Enseco-East Project No. 13637

Project No. 13637 met all performance standards

CHAIN OF CUSTODY RECORD DOCUMENTATION

GERAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. 11356

CHAIN-OF-CUSTODY RECORD

Project Number: NY08226

Project Location: Pomona, NJ

Laboratory: Enseco - East

Sampler(s)/Affiliation: J. Gomez

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION: 125 ml Glass Jar Total Lead + Total Zinc	1000 ml poly bottle Lead + Zinc								TOTAL
SB-1 (G)	S	5-2-91/10:10		1									1
SB-1 (S)	S	5-2-91/10:10		1									1
Field Equip	L	5-2-91/2:15			1								1

Full CLP deliverables

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 3

Relinquished by: Jorge Gomez Received by:	Organization: Geraghty + Miller Organization:	Date 5/2/91 Time 4:10 PM	Seal Intact? (Yes) No N/A
Relinquished by: Received by:	Organization: Enseco East Organization: [illegible]	Date 5/3/91 Time [illegible]	Seal Intact? Yes No N/A

Special Instructions/Remarks: Enseco # 13637

Delivery Method: ☐ In Person ☒ Common Carrier Federal Express ☐ Lab Courier ☐ Other ______ SPECIFY

20000002

METALS DATA PACKAGE

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

SOW No.: 7/87_

EPA Sample No.	Lab Sample ID.
__FIELD_EQUI	1363704___
__FIELD_EQUI	1363704D__
__FIELD_EQUI	1363704S__
__SB-1(G)___	1363701___
__SB-1(G)___	1363701D__
__SB-1(G)___	1363701S__
__SB-1(S)___	1363702___

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:
SOILS_AND_WATERS

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: _____

Date: 5/21/91

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB-1(G)

Lab Name: ENSECO_EAST Contract:

Lab Code: ENSECO Case No.: SAS No.: SDG No.: GEM637

Matrix (soil/water): SOIL Lab Sample ID: 1363701

Level (low/med): LOW Date Received: 05/03/91

% Solids: 67.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	82400		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	15600			P
	Tin				NR

Color Before: WHITE Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SOILS

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SB-1(S)

Lab Name: ENSECO_EAST Contract:

Lab Code: ENSECO Case No.: SAS No.: SDG No.: GEM637

Matrix (soil/water): SOIL Lab Sample ID: 1363702

Level (low/med): LOW Date Received: 05/03/91

% Solids: 88.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	255		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	362			P
	Tin				NR

Color Before: WHITE Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SOILS

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FIELD EQUIP

Lab Name: ENSECO_EAST Contract:

Lab Code: ENSECO Case No.: SAS No.: SDG No.: GEM637

Matrix (soil/water): WATER Lab Sample ID: 1363704

Level (low/med): LOW Date Received: 05/03/91

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	21.7	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	15.3	B		P
	Tin				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WATERS

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Initial Calibration Source: SPEX/JT BAKE

Continuing Calibration Source: JT BAKER____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	1000.0	1040.67	104.1	1000.0	1004.92	100.5	1011.01	101.1	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc	1000.0	1003.77	100.4	2000.0	1997.30	99.9	1981.03	99.1	P
Tin									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Initial Calibration Source: SPEX/JT BAKE

Continuing Calibration Source: JT BAKER____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				1000.0	1013.75	101.4			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc				2000.0	1999.01	100.0			P
Tin									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

AA CRDL Standard Source: JT BAKER____

ICP CRDL Standard Source: JT BAKER____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc				40.0	39.60	99.0	42.45	106.1

U.S. EPA - CLP

3
BLANKS

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	21.7	U	21.7	U	21.7	U	21.7	U	21.7	U	P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc	3.4	U	3.4	U	6.3	B	5.6	B	11.3	B	P
Tin											NR

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3
BLANKS

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead									4.340	U	P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc									0.792	B	P
Tin											NR

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ ICS Source: EPA(1287)___

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead		1052		968.5	92.1		989.1	94.0
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc		937		890.8	95.1		891.3	95.1

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

FIELD EQUIPS

Lab Name: ENSECO_EAST Contract:

Lab Code: ENSECO Case No.: SAS No.: SDG No.: GEM637

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	514.9300		21.7000	U	500.0	103.0		P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc	75-125	485.8800		15.3400	B	500.0	94.1		P
Tin									NR

Comments:
WATERS

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

SB-1(G) S

Lab Name: ENSECO_EAST Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Matrix (soil/water): SOIL_ Level (low/med): LOW__

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead		357459.3796		82387.0133		147.7			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc		5212.9985		15591.8818		147.7	-7026.5		P
Tin									NR

Comments:
SOILS

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

FIELD EQUIPD

Lab Name: ENSECO_EAST Contract:

Lab Code: ENSECO Case No.: SAS No.: SDG No.: GEM637

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 100.0 % Solids for Duplicate: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead		21.7000	U	21.7000	U			P
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc		15.3400	B	6.3500	B	82.9		P
Tin								NR

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6
DUPLICATES

EPA SAMPLE NO.

SB-1(G) D

Lab Name: ENSECO_EAST Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 67.7 % Solids for Duplicate: 67.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead		82387.0133		106399.9719		25.4	*	P
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc		15591.8818		16193.4461		3.8		P
Tin								NR

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7

LABORATORY CONTROL SAMPLE

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Solid LCS Source: JTBAKER_____

Aqueous LCS Source: JTBAKER_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	500.0	490.50	98.1	50.0	49.1		80.0	120.0	98.2
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc	500.0	481.30	96.3	50.0	47.2		80.0	120.0	94.4
Tin									

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8
STANDARD ADDITION RESULTS

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Concentration Units: ug/L

EPA Sample No.	An	Dil.	0 ADD CON	1 ADD CON		2 ADD CON		3 ADD CON		Final Conc.	r	Q

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9

ICP SERIAL DILUTION

EPA SAMPLE NO.

SB-1(S) L

Lab Name: ENSECO_EAST Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

Matrix (soil/water): SOIL_ Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead	1132.75		1155.28		2.0		P
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc	1608.70		1620.14		0.7		P

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11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 11/07/90

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	237.30		200	34.3	P
Antimony	206.80		60	28.2	P
Arsenic			10		NR
Barium	493.40		200	0.5	P
Beryllium	313.00		5	0.7	P
Cadmium	228.80		5	2.7	P
Calcium	317.90		5000	12.5	P
Chromium	267.70		10	5.9	P
Cobalt	228.60		50	6.1	P
Copper	324.70		25	3.9	P
Iron	259.90		100	9.5	P
Lead	220.30		5	21.7	P
Magnesium	383.20		5000	44.5	P
Manganese	257.60		15	0.9	P
Mercury			0.2		NR
Nickel	231.60		40	16.7	P
Potassium	766.40		5000	615.2	P
Selenium			5		NR
Silver	328.00		10	3.4	P
Sodium	589.00		5000	53.8	P
Thallium			10		NR
Vanadium	292.40		50	4.2	P
Zinc	213.80		20	3.4	P

Comments:

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12A
ICP INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	AS
Aluminum	237.30				0.0000968	
Antimony	206.80	-0.0000535			0.0000352	
Arsenic	193.70	0.0070312		0.0012379		
Barium	493.40					
Beryllium	313.00					
Cadmium	228.80			-0.0000790		0.0035766
Calcium	317.90			0.0001214		
Chromium	267.70	0.0000108				0.0003276
Cobalt	228.60	0.0000098		0.0000668	-0.0000065	
Copper	324.70	0.0000165		-0.0000113		
Iron	259.90	0.0001887				0.0016753
Lead	220.30	0.0007199		0.0001870		
Magnesium	383.20					
Manganese	257.60	0.0000161		-0.0001806	0.0000077	0.0000543
Mercury						
Nickel	231.60			0.0000321	-0.0000231	0.0003732
Potassium	766.40					
Selenium						
Silver	328.00			-0.0000660		
Sodium	589.00					
Thallium						
Vanadium	292.40			-0.0001538		
Zinc	213.80	0.0000111		0.0001138	0.0000118	

Comments:

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12B
ICP INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Wavelength (nm)	Interelement Correction Factors for : BA	BE	CD	CO	CR
Aluminum	237.30				-0.0034440	-0.0036112
Antimony	206.80				-0.0018980	0.0064468
Arsenic	193.70					
Barium	493.40					
Beryllium	313.00					0.0000190
Cadmium	228.80		0.0035090		-0.0051067	0.0008871
Calcium	317.90					
Chromium	267.70					
Cobalt	228.60	0.0009920		0.0012860		0.0002504
Copper	324.70					
Iron	259.90					
Lead	220.30				-0.0281526	-0.0008799
Magnesium	383.20					0.0006438
Manganese	257.60					
Mercury						
Nickel	231.60				0.0001788	
Potassium	766.40					
Selenium						
Silver	328.00					
Sodium	589.00					
Thallium						
Vanadium	292.40					-0.0023161
Zinc	213.80				-0.0000831	

Comments:

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12B
ICP INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Wave-length (nm)	Interelement Correction Factors for : CU	LI	MN	MO	NI
Aluminum	237.30					
Antimony	206.80				0.0031529	-0.0044613
Arsenic	193.70				0.0009132	
Barium	493.40					
Beryllium	313.00				-0.0000332	
Cadmium	228.80				0.0000343	-0.0015226
Calcium	317.90				0.0004580	
Chromium	267.70	0.0001856			-0.0016175	0.0001442
Cobalt	228.60				0.0002109	0.0004159
Copper	324.70				0.0004623	
Iron	259.90	0.0008705			0.0006156	0.0005539
Lead	220.30				-0.0003184	
Magnesium	383.20				0.0013193	-0.0045971
Manganese	257.60				-0.0003478	
Mercury						
Nickel	231.60	0.0001587				
Potassium	766.40					
Selenium						
Silver	328.00					
Sodium	589.00					
Thallium						
Vanadium	292.40	-0.0000567	-0.0001270	-0.0001270	-0.0622959	
Zinc	213.80	0.0046606			-0.0001943	0.0031665

Comments:

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12B

ICP INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Wavelength (nm)	Interelement Correction Factors for : SB	TI	TL	V_	ZN
Aluminum	237.30					
Antimony	206.80		0.0014762		-0.0078473	-0.0003810
Arsenic	193.70	0.0006066			0.0172519	
Barium	493.40					
Beryllium	313.00		0.0000377		0.0097424	
Cadmium	228.80				0.0000686	
Calcium	317.90		0.0004330		0.0005337	
Chromium	267.70	0.0000989	0.0002262		0.0007773	0.0002922
Cobalt	228.60		0.0017787			
Copper	324.70		-0.0002740		-0.0001160	
Iron	259.90		-0.0032522		0.0006539	0.0009654
Lead	220.30	-0.0017075	0.0005085		-0.0003559	
Magnesium	383.20					
Manganese	257.60				-0.0001086	0.0000440
Mercury						
Nickel	231.60	0.0001525	0.0001964	0.0007260		0.0002183
Potassium	766.40					
Selenium						
Silver	328.00		0.0000608		-0.0045016	
Sodium	589.00					
Thallium						
Vanadium	292.40		0.0003360			
Zinc	213.80				0.0002637	

Comments:

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12B

ICP INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Wavelength (nm)	Interelement Correction Factors for : ZR	__	__	__	__
Aluminum	237.30	-0.0702260				
Antimony	206.80					
Arsenic	193.70	-0.0017220				
Barium	493.40					
Beryllium	313.00	-0.0032953				
Cadmium	228.80					
Calcium	317.90					
Chromium	267.70	0.0001397				
Cobalt	228.60	-0.0000738				
Copper	324.70					
Iron	259.90					
Lead	220.30					
Magnesium	383.20					
Manganese	257.60					
Mercury						
Nickel	231.60	-0.0001389				
Potassium	766.40					
Selenium						
Silver	328.00	0.0023211				
Sodium	589.00					
Thallium						
Vanadium	292.40	0.0000505				
Zinc	213.80					

Comments:

U.S. EPA - CLP

13
ICP LINEAR RANGES (QUARTERLY)

Lab Name: ENSECO_EAST_____ Contract: _____

Lab Code: ENSECO Case No.: _____ SAS No.: _____ SDG No.: GEM637

ICP ID Number: TJA61_____ Date: 10/20/90

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	5.00	1000000.0	
Antimony	5.00	100000.0	
Arsenic	5.00	100000.0	
Barium	5.00	100000.0	
Beryllium	5.00	100000.0	
Cadmium	5.00	100000.0	
Calcium	5.00	1000000.0	
Chromium	5.00	100000.0	
Cobalt	5.00	100000.0	
Copper	5.00	100000.0	
Iron	5.00	500000.0	
Lead	5.00	100000.0	
Magnesium	5.00	100000.0	
Manganese	5.00	100000.0	
Mercury			NR
Nickel	5.00	100000.0	
Potassium	5.00	1000000.0	
Selenium			NR
Silver	5.00	100000.0	
Sodium	5.00	100.0	
Thallium			NR
Vanadium	5.00	100000.0	
Zinc	5.00	100000.0	

Comments:

ICP RAW DATA

ICP COVER SHEET
Industrial Metals

Analyst: J. Minervini CLP Date: 5-14-91

Insturment ID: ALEXIS ICAP61

INDUSTRIAL CLP

Special Instructions Y	N	Y/NA	Project Number	Sample Numbers	Analysis Test	QC Lot Number	Analytes
			13637	4	ICP-CLPR-A	080591 B	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
			13637	1-2	ICP-CLPR-5	090591 C	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
			13891	1	ICP-AT	140591 D	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
			13592	1-2	ICP-AT / ICP-AT	050591 B	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
			IDL's	1-7		2nd Quarter 1991 Day 1	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
							Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
							Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr
							Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Li Mg Mn Mo Ni P K Se SiO2 Ag Na Sr Sn Tl Ti V Zr Zr

Comments

Analysis Report Summary Tue 05-14-91 04:18:40 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV-1	910514	ICAP1	05/14/91	09:43	JM	S	CONC
2	ICV-2	910514	ICAP1	05/14/91	09:46	JM	S	CONC
3	ICV-3	910514	ICAP1	05/14/91	09:49	JM	S	CONC
4	ICV-4	910514	ICAP1	05/14/91	10:08	JM	S	CONC
5	ICV-5	910514	ICAP1	05/14/91	10:10	JM	S	CONC
6	ICB	910514	ICAP1	05/14/91	10:18	JM	S	CONC
7	CRI	910514	ICAP1	05/14/91	10:22	JM	S	CONC
8	ICSA	910514	ICAP1	05/14/91	10:24	JM	S	CONC
9	ICSAB	910514	ICAP1	05/14/91	10:26	JM	S	CONC
10	CCV1	910514	ICAP1	05/14/91	10:30	JM	S	CONC
11	CCB1	910514	ICAP1	05/14/91	10:35	JM	S	CONC
12	ICP-AT BLANK	910514	ICAP1	05/14/91	10:43	JM	S	CONC
13	ICP-AT DCS	910514	ICAP1	05/14/91	10:44	JM	S	CONC
14	ICP-AT DCS	910514	ICAP1	05/14/91	10:46	JM	S	CONC
15	1363704	910514	ICAP1	05/14/91	10:49	JM	S	CONC
16	1363704S	910514	ICAP1	05/14/91	10:51	JM	S	CONC
17	1363704D	910514	ICAP1	05/14/91	10:55	JM	S	CONC
18	ICP-SD BLANK	910514	ICAP1	05/14/91	10:58	JM	S	CONC
19	ICP-SD BLANK	910514	ICAP1	05/14/91	10:58	JM	S	CONC
20	ICP-S DCS	910514	ICAP1	05/14/91	11:10	JM	S	CONC
21	ICP-S DCS	910514	ICAP1	05/14/91	11:13	JM	S	CONC
22	1363701	910514	ICAP1	05/14/91	11:22	JM	S	CONC
23	CCV-2	910514	ICAP1	05/14/91	11:28	JM	S	CONC
24	CCB-2	910514	ICAP1	05/14/91	11:39	JM	S	CONC
25	1363701	910514	ICAP1	05/14/91	11:41	JM	S	CONC
26	1363701S	910514	ICAP1	05/14/91	11:43	JM	S	CONC
27	1363701S	910514	ICAP1	05/14/91	12:14	JM	S	CONC
28	1363701D	910514	ICAP1	05/14/91	12:20	JM	S	CONC
29	1363702	910514	ICAP1	05/14/91	12:32	JM	S	CONC
30	1363702L	910514	ICAP1	05/14/91	12:35	JM	S	CONC
31	CRI	910514	ICAP1	05/14/91	12:41	JM	S	CONC
32	ICSA	910514	ICAP1	05/14/91	12:46	JM	S	CONC
33	ICSAB	910514	ICAP1	05/14/91	12:49	JM	S	CONC
34	CCV3	910514	ICAP1	05/14/91	12:52	JM	S	CONC
35	CCB3	910514	ICAP1	05/14/91	12:54	JM	S	CONC
36	ICP-AT BLANK	910514	ICAP1	05/14/91	14:07	JM	S	CONC
37	ICP-AT DCS	910514	ICAP1	05/14/91	14:10	JM	S	CONC
38	ICP-AT DCS	910514	ICAP1	05/14/91	14:15	JM	S	CONC
39	13891-01	910514	ICAP1	05/14/91	14:22	JM	S	CONC
40	13891-01MS	910514	ICAP1	05/14/91	14:24	JM	S	CONC
41	13891-01DU	910514	ICAP1	05/14/91	14:25	JM	S	CONC
42	13592-01	910514	ICAP1	05/14/91	14:27	JM	S	CONC
43	13592-01MS	910514	ICAP1	05/14/91	14:30	JM	S	CONC
44	13592-01DU	910514	ICAP1	05/14/91	14:32	JM	S	CONC
45	13592-02	910514	ICAP1	05/14/91	14:34	JM	S	CONC
46	CCV-4	910514	ICAP1	05/14/91	15:08	JM	S	CONC
47	CCV-4 (SiO2)	910514	ICAP1	05/14/91	15:12	JM	S	CONC
48	CCB-4	910514	ICAP1	05/14/91	15:22	JM	S	CONC
49	13592-02	910514	ICAP1	05/14/91	15:35	JM	S	CONC
50	CCV-5	910514	ICAP1	05/14/91	15:56	JM	S	CONC
51	CCV-5 (SiO2)	910514	ICAP1	05/14/91	15:59	JM	S	CONC
52	CCB-5	910514	ICAP1	05/14/91	16:00	JM	S	CONC
53	ICS	910514	ICAP1	05/14/91	16:05	JM	S	CONC

090591B

saved Twice JM

090591C

140591D

0000025

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
54	CCV-6	910514	ICAP1	05/14/91	16:13	JM	S	CONC
55	CCB-6	910514	ICAP1	05/14/91	16:15	JM	S	CONC

IDL's 1-7

2nd Quarter 1991 1ST Day

Method: ICAP1 Standard: STD1-Blank

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	.0010	-.0004	.0001	.0000	.0037	.0003	.0002
SDev	.0011	.0006	.0016	.0000	.0004	.0004	.0006
%RSD	113.1	-141.4	1556.	.0000	11.47	141.4	282.8
#1	.0002	.0000	.0012	.0000	.0034	.0006	.0006
#2	.0018	-.0008	-.0010	.0000	.0040	.0000	-.0002

Elem	CR	CO	CU	FE	PB	MG	MN
Avge	.0009	.0002	.0009	.0014	.0008	.0193	.0003
SDev	.0013	.0009	.0001	.0003	.0006	.0050	.0001
%RSD	141.4	424.3	15.71	20.20	70.71	25.65	47.14
#1	.0018	.0008	.0010	.0016	.0012	.0228	.0004
#2	.0000	-.0004	.0008	.0012	.0004	.0158	.0002

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Avge	-.0031	.0093	-.0038	.0068	-.1677	.0002	.0017
SDev	.0001	.0064	.0006	.0074	.0072	.0006	.0001
%RSD	-4.562	68.43	-14.89	108.1	-4.301	282.8	8.319
#1	-.0032	.0138	-.0034	.0120	-.1626	.0006	.0016
#2	-.0030	.0048	-.0042	.0016	-.1728	-.0002	.0018

Elem	B	LI	P	MO	SE	SR	SiO2
Avge	.0004	.0003	.0015	.0002	-.0020	-.0005	.0359
SDev	.0003	.0004	.0001	.0003	.0003	.0004	.0010
%RSD	70.71	141.4	9.428	141.4	-14.14	-84.85	2.758
#1	.0006	.0006	.0016	.0000	-.0018	-.0002	.0366
#2	.0002	.0000	.0014	.0004	-.0022	-.0008	.0352

Elem	SN	TL	TI	ZR
Avge	.0031	.0164	.0005	.0002
SDev	.0001	.0071	.0001	.0009
%RSD	4.562	43.12	28.28	424.3
#1	.0030	.0214	.0006	.0008
#2	.0032	.0114	.0004	-.0004

Standardization Rpt. Tue 05-14-91 09:31:49 AM page 1

Method: ICAP1 Standard: STD3

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	.6175	.0767	.1357	.6515	.6202	.0008	.4017
SDev	.0050	.0004	.0021	.0007	.0003	.0003	.0004
%RSD	.8016	.5531	1.563	.1085	.0456	35.36	.1056
#1	.6140	.0770	.1372	.6520	.6200	.0010	.4020
#2	.6210	.0764	.1342	.6510	.6204	.0006	.4014

Elem	CR	CO	CU	FE	PB	MG	MN
Avge	.3820	.2220	.2947	2.165	.0877	1.227	.4338
SDev	.0003	.0000	.0004	.000	.0001	.005	.0009
%RSD	.0740	.0000	.1440	.0196	.1613	.4149	.1956
#1	.3822	.2220	.2950	2.165	.0878	1.231	.4344
#2	.3818	.2220	.2944	2.165	.0876	1.224	.4332

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Avge	.4346	.0089	-.0048	.0549	2.429	.2008	.3588
SDev	.0037	.0016	.0008	.0018	.010	.0009	.0006
%RSD	.8461	17.48	-17.68	3.349	.3960	.4226	.1577
#1	.4320	.0100	-.0042	.0562	2.435	.2014	.3592
#2	.4372	.0078	-.0054	.0536	2.422	.2002	.3584

Elem	B	LI	P	MO	SE	SR	SiO2
Avge	.1715	.2449	1.343	.0986	.3605	5.713	.0598
SDev	.0004	.0024	.007	.0009	.0010	.003	.0026
%RSD	.2474	.9817	.4845	.8606	.2746	.0569	4.257
#1	.1718	.2432	1.347	.0992	.3598	5.711	.0616
#2	.1712	.2466	1.338	.0980	.3612	5.715	.0580

Elem	SN	TL	TI	ZR
Avge	.2252	1.644	.6626	.5186
SDev	.0020	.011	.0006	.0059
%RSD	.8792	.6968	.0854	1.145
#1	.2266	1.652	.6630	.5228
#2	.2238	1.636	.6622	.5144

Standardization Rpt. Tue 05-14-91 09:36:01 AM page 1

Method: ICAP1 Standard: STD4

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	.0019	.0004	-.0050	.0025	.0038	-.0003	3.922
SDev	.0016	.0006	.0011	.0001	.0000	.0004	.010
%RSD	81.88	141.4	-22.63	5.657	.0000	-141.4	.2560
#1	.0030	.0008	-.0058	.0024	.0038	.0000	3.915
#2	.0008	.0000	-.0042	.0026	.0038	-.0006	3.929

Elem	CR	CO	CU	FE	PB	MG	MN
Avge	.0006	-.0003	.0009	.0040	.0011	11.69	.0008
SDev	.0011	.0001	.0001	.0003	.0004	.04	.0000
%RSD	188.6	-47.14	15.71	7.071	38.57	.3338	.0000
#1	-.0002	-.0004	.0008	.0038	.0008	11.67	.0008
#2	.0014	-.0002	.0010	.0042	.0014	11.72	.0008

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Avge	-.0022	.8489	-.0039	.3402	25.16	.0001	.0023
SDev	.0025	.0047	.0007	.0051	.19	.0001	.0001
%RSD	-115.7	.5498	-18.13	1.497	.7460	141.4	6.149
#1	-.0004	.8456	-.0034	.3366	25.03	.0000	.0024
#2	-.0040	.8522	-.0044	.3438	25.29	.0002	.0022

Elem	B	LI	P	MO	SE	SR	SiO2
Avge	.0002	.0001	.0028	-.0006	-.0003	.0374	.0360
SDev	.0009	.0001	.0026	.0000	.0013	.0000	.0014
%RSD	424.3	141.4	90.91	.0000	-424.3	.0000	3.928
#1	-.0004	.0000	.0046	-.0006	-.0012	.0374	.0370
#2	.0008	.0002	.0010	-.0006	.0006	.0374	.0350

Elem	SN	TL	TI	ZR
Avge	.0033	-.0203	-.0014	.0003
SDev	.0001	.0058	.0003	.0004
%RSD	4.285	-28.56	-20.20	141.4
#1	.0032	-.0162	-.0012	.0000
#2	.0034	-.0244	-.0016	.0006

Method: ICAP1 Standard: STD2

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	.0020	-.0001	.0013	.0000	.0037	.4371	.0029
SDev	.0006	.0001	.0001	.0000	.0004	.0004	.0004
%RSD	28.28	-141.4	10.88	.0000	11.47	.0971	14.63
#1	.0024	.0000	.0012	.0000	.0040	.4374	.0026
#2	.0016	-.0002	.0014	.0000	.0034	.4368	.0032

Elem	CR	CO	CU	FE	PB	MG	MN
Avge	.0007	.0011	.0013	.0022	.0012	.0233	.0004
SDev	.0010	.0004	.0001	.0003	.0003	.0018	.0000
%RSD	141.4	38.57	10.88	12.86	23.57	7.890	.0000
#1	.0014	.0008	.0012	.0024	.0010	.0220	.0004
#2	.0000	.0014	.0014	.0020	.0014	.0246	.0004

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Avge	-.0037	.0092	.7328	.0081	-.1584	.0005	.0034
SDev	.0027	.0037	.0020	.0010	.0045	.0001	.0003
%RSD	-72.62	39.97	.2702	12.22	-2.857	28.28	8.319
#1	-.0018	.0066	.7342	.0074	-.1616	.0006	.0036
#2	-.0056	.0118	.7314	.0088	-.1552	.0004	.0032

Elem	B	LI	P	MO	SE	SR	SiO2
Avge	.0010	.0000	-.0001	.0003	-.0006	.0001	.0627
SDev	.0000	.0003	.0030	.0001	.0003	.0001	.0013
%RSD	.0000	.0000	-2970.	47.14	-47.14	141.4	2.030
#1	.0010	-.0002	.0020	.0004	-.0004	.0000	.0636
#2	.0010	.0002	-.0022	.0002	-.0008	.0002	.0618

Elem	SN	TL	TI	ZR
Avge	.0031	.0173	.0008	.0004
SDev	.0007	.0044	.0000	.0000
%RSD	22.81	25.34	.0000	.0000
#1	.0036	.0204	.0008	.0004
#2	.0026	.0142	.0008	.0004

Standardization Rpt. Tue 05-14-91 09:42:19 AM page 1

Method: ICAP1 Standard: STD5

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	-.0002	-.0002	-.0024	.0000	.0038	.0003	.0005
SDev	.0011	.0000	.0011	.0000	.0003	.0001	.0004
%RSD	-565.7	.0000	-47.14	.0000	7.443	47.14	84.85
#1	.0006	-.0002	-.0032	.0000	.0036	.0004	.0008
#2	-.0010	-.0002	-.0016	.0000	.0040	.0002	.0002

Elem	CR	CO	CU	FE	PB	MG	MN
Avge	.0013	.0004	.0012	.0078	.0014	.0182	.0082
SDev	.0013	.0003	.0003	.0000	.0003	.0003	.0000
%RSD	97.91	70.71	23.57	.0000	20.20	1.554	.0000
#1	.0022	.0006	.0010	.0078	.0016	.0180	.0082
#2	.0004	.0002	.0014	.0078	.0012	.0184	.0082

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Avge	-.0015	.0073	.0014	.0061	-.1761	.0002	.0020
SDev	.0021	.0004	.0031	.0027	.0018	.0003	.0003
%RSD	-141.4	5.812	222.2	44.05	-1.044	141.4	14.14
#1	-.0030	.0070	.0036	.0080	-.1748	.0004	.0022
#2	.0000	.0076	-.0008	.0042	-.1774	.0000	.0018

Elem	B	LI	P	MO	SE	SR	SiO2
Avge	.0000	-.0003	.0012	.0000	.0002	-.0001	4.217
SDev	.0000	.0001	.0040	.0000	.0009	.0001	.006
%RSD	.0000	-47.14	330.0	.0000	424.3	-141.4	.1476
#1	.0000	-.0004	-.0016	.0000	.0008	.0000	4.213
#2	.0000	-.0002	.0040	.0000	-.0004	-.0002	4.221

Elem	SN	TL	TI	ZR
Avge	.0032	.0198	.0008	.0007
SDev	.0003	.0009	.0003	.0007
%RSD	8.839	4.285	35.36	101.0
#1	.0030	.0192	.0006	.0012
#2	.0034	.0204	.0010	.0002

Standardization Report Tue 05-14-91 09:42:47 AM page 1

Method: ICAP1

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardiz
AL	237.313	STD3	STD1-Blank	15.9699	-.015970	05/14/91 09:30
SB	206.838	STD3	STD1-Blank	25.8423	.010337	05/14/91 09:30
AS	193.696	STD3	STD1-Blank	15.5267	-.001553	05/14/91 09:30
BA	493.409	STD3	STD1-Blank	3.06984	.000000	05/14/91 09:30
BE	313.042	STD3	STD1-Blank	3.26511	-.012081	05/14/91 09:30
CD	228.802	STD2	STD1-Blank	4.57875	-.001374	05/14/91 09:38
CA	317.933	STD4	STD1-Blank	25.4991	-.005100	05/14/91 09:35
CR	267.716	STD3	STD1-Blank	5.24952	-.004725	05/14/91 09:30
CO	228.616	STD3	STD1-Blank	9.05346	-.001811	05/14/91 09:30
CU	324.754	STD3	STD1-Blank	6.80803	-.006127	05/14/91 09:30
FE	259.940	STD3	STD1-Blank	4.62040	-.006469	05/14/91 09:30
PB	220.353	STD3	STD1-Blank	22.4081	-.017926	05/14/91 09:30
MG	383.231	STD4	STD1-Blank	8.56612	-.165326	05/14/91 09:35
MN	257.610	STD3	STD1-Blank	4.60713	-.001382	05/14/91 09:30
NI	231.604	STD3	STD1-Blank	4.59016	.014229	05/14/91 09:30
K	766.491	STD4	STD1-Blank	119.104	-1.10767	05/14/91 09:35
AG	328.068	STD2	STD1-Blank	2.71518	.010318	05/14/91 09:38
NaHi	330.223	STD4	STD1-Blank	299.940	-2.03959	05/14/91 09:35
NaLo	588.995	STD3	STD1-Blank	3.85164	.645919	05/14/91 09:30
V	292.402	STD3	STD1-Blank	9.31902	-.001864	05/14/91 09:30
ZN	213.856	STD3	STD1-Blank	5.64980	-.009605	05/14/91 09:30
B	249.678	STD3	STD1-Blank	11.2961	-.004518	05/14/91 09:30
LI	670.704	STD3	STD1-Blank	8.17661	-.002453	05/14/91 09:30
P	214.914	STD3	STD1-Blank	37.3373	-.056006	05/14/91 09:30
MO	202.030	STD3	STD1-Blank	20.3007	-.004060	05/14/91 09:30
SE	196.026	STD3	STD1-Blank	27.2349	.054470	05/14/91 09:30
SR	421.552	STD3	STD1-Blank	.350042	.000175	05/14/91 09:30
SiO2	288.158	STD5	STD1-Blank	10.2365	-.367492	05/14/91 09:41
SN	189.989	STD3	STD1-Blank	44.9079	-.139214	05/14/91 09:30
TL	377.572	STD3	STD1-Blank	6.11669	-.100314	05/14/91 09:30
TI	334.941	STD3	STD1-Blank	3.02322	-.001512	05/14/91 09:30
ZR	339.198	STD3	STD1-Blank	3.85292	-.000771	05/14/91 09:30

Method: ICAP1 Sample Name: ICV-1 Operator: JM
Run Time: 05/14/91 09:43:54
Comment: QC-19,LOT3-41AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0009	1.024	1.022	.0000	1.035	1.022	1.051
SDev	.0159	.004	.024	.0000	.000	.007	.004
%RSD	-1854.	.3484	2.376	.0000	.0006	.6995	.3427
#1	-.0121	1.022	1.039	.0000	1.035	1.017	1.048
#2	.0104	1.027	1.004	.0000	1.035	1.027	1.053

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.018	1.055	.9912	1.021	1.041	1.063	1.002
SDev	.008	.003	.0010	.001	.006	.028	.001
%RSD	.8016	.2428	.0971	.0646	.6157	2.616	.0648
#1	1.012	1.057	.9919	1.022	1.045	1.044	1.002
#2	1.024	1.053	.9905	1.021	1.036	1.083	1.003

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	1.015	-.2978	.0002	-.2413	-.0150	1.015	1.004
SDev	.011	.2358	.0008	.5105	.0142	.001	.002
%RSD	1.087	-79.20	328.3	-211.6	-94.28	.1141	.1554
#1	1.023	-.4645	.0008	-.6023	-.0250	1.014	1.005
#2	1.008	-.1310	-.0003	.1197	-.0050	1.016	1.003

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0010	.0000	-.0897	.9808	.9388	.0000	.1032
SDev	.0016	.0035	.0634	.0029	.0346	.0002	.0114
%RSD	157.7	2980e6	-70.72	.2931	3.689	565.7	11.07
#1	.0021	-.0025	-.1345	.9829	.9143	.0002	.1113
#2	-.0001	.0025	-.0448	.9788	.9632	-.0001	.0952

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0032	1.048	1.017	-.0012
SDev	.0321	.001	.003	.0017
%RSD	1175.	.1266	.3524	-139.9
#1	-.0237	1.048	1.019	-.0024
#2	.0301	1.049	1.015	.0000

Method: ICAP1 Sample Name: ICV-2 Operator: JM
Run Time: 05/14/91 09:46:15
Comment: QC-7,LOT 3-47AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9709	.0182	-.0279	.9946	.0010	.0001	.0128
SDev	.0000	.0036	.0330	.0017	.0000	.0007	.0036
%RSD	.0031	20.00	-118.2	.1746	1.491	837.1	28.25
#1	.9709	.0156	-.0046	.9959	.0010	-.0004	.0102
#2	.9709	.0208	-.0512	.9934	.0010	.0006	.0153

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0037	.0026	.0054	.0042	-.0028	-.0008	.0013
SDev	.0030	.0000	.0010	.0020	.0032	.0000	.0000
%RSD	-80.32	.0561	17.72	47.17	-111.2	-.9561	.0256
#1	-.0053	.0026	.0061	.0055	-.0006	-.0008	.0013
#2	-.0016	.0026	.0048	.0028	-.0051	-.0008	.0013

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0078	9.647	.9959	.8347	.9618	-.0012	.0033
SDev	.0013	.185	.0046	.0017	.0011	.0013	.0008
%RSD	16.42	1.921	.4620	.2087	.1133	-111.1	24.26
#1	.0087	9.516	.9993	.8359	.9610	-.0021	.0028
#2	.0069	9.778	.9927	.8335	.9625	-.0003	.0039

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9692	.0000	-.0700	-.0041	.0302	.0002	1.161
SDev	.0192	.001	.0212	.0000	.0809	.0001	.004
%RSD	1.980	-1324e6	-30.22	-.0339	268.2	40.41	.3753
#1	.9829	-.0008	-.0850	-.0041	-.0270	.0003	1.158
#2	.9556	.0008	-.0551	-.0041	.0873	.0002	1.164

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0139	.0583	.0024	-.0012
SDev	.0137	.0320	.0004	.0005
%RSD	[illegible]	83.65	17.59	-46.41
#1	-.0049	.0609	.0027	-.0008
#2	-.0229	.0157	.0021	-.0015

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Method: ICAP1 Sample Name: ICV-3 Operator: JM
Run Time: 05/14/91 09:49:21
Comment: SOLUTION 041891
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0045	.0241	-.0257	.0049	.0006	-.0007	52.29
SDev	.0181	.0293	.0023	.0009	.0005	.0006	.00
%RSD	400.0	121.7	-8.840	17.68	78.56	-87.61	.0069
#1	.0173	.0034	-.0273	.0043	.0010	-.0003	52.29
#2	-.0083	.0448	-.0241	.0055	.0003	-.0012	52.29

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0236	.0011	.0041	.7111	.0134	52.74	.0159
SDev	.0045	.0013	.0010	.0020	.0062	.27	.0013
%RSD	18.93	113.1	23.43	.2759	46.58	.5099	8.202
#1	.0268	.0002	.0048	.7124	.0178	52.93	.0168
#2	.0204	.0020	.0034	.7097	.0090	52.55	.0150

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0420	50.74	.0017	53.44	50.03	.0035	.0070
SDev	.0013	.45	.0000	.43	.32	.0023	.0008
%RSD	3.118	.8963	.5973	.7972	.6326	65.12	11.54
#1	.0430	51.06	.0017	53.74	50.25	.0017	.0064
#2	.0411	50.42	.0017	53.13	49.81	.0051	.0076

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0069	-.0016	-.0585	-.0069	.0450	.0034	.8222
SDev	.0048	.0012	.1322	.0057	.0001	.0001	.0058
%RSD	69.87	-70.71	-226.1	-83.63	.1544	1.473	.7012
#1	.0103	-.0008	-.1519	-.0028	.0450	.0034	.8181
#2	.0035	-.0025	.0350	-.0109	.0449	.0033	.8263

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0090	-.0075	-.0009	-.0007
SDev	.0064	.0026	.0004	.0000
%RSD	70.85	-35.29	-45.58	-.7548
#1	.0045	-.0094	-.0006	-.0007
#2	.0135	-.0056	-.0012	-.0007

0000040

Method: ICAP1 Sample Name: ICV-4 Operator: JM
Run Time: 05/14/91 10:08:25
Comment: SOLUTION 032791
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0349	.0103	-.0416	.0000	.0007	-.0008	.0077
SDev	.0357	.0001	.0112	.0000	.0010	.0032	.0036
%RSD	-102.3	.4418	-26.95	.0000	127.1	-391.2	47.15
#1	-.0096	.0103	-.0496	.0000	.0001	-.0031	.0051
#2	-.0601	.0103	-.0337	.0000	.0014	.0015	.0102

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0025	.0010	-.0007	-.0028	.0023	.0026	-.0005
SDev	.0000	.0013	.0039	.0026	.0095	.0340	.0013
%RSD	.4792	130.0	-569.1	-94.07	408.8	1328.	-281.5
#1	.0025	.0001	-.0034	-.0046	.0090	-.0215	-.0014
#2	.0025	.0019	.0020	-.0009	-.0044	.0266	.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0045	-.2263	-.0013	-.1261	-.0208	-.0024	-.0005
SDev	.0071	.1348	.0011	.6822	.0071	.0004	.0016
%RSD	-158.1	-59.55	-86.28	-540.9	-34.05	-14.90	-284.2
#1	-.0095	-.3216	-.0021	.3563	-.0258	-.0021	-.0016
#2	.0005	-.1310	-.0005	-.6085	-.0158	-.0026	.0006

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0030	.9804	23.53	-.0079	.0522	1.032	.0951
SDev	.0031	.0000	.36	.0057	.0231	.002	.0480
%RSD	-102.7	.0000	1.525	-72.56	44.28	.2063	50.51
#1	-.0008	.9804	23.27	-.0038	.0358	1.030	.0611
#2	-.0052	.9804	23.78	-.0120	.0685	1.033	.1290

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.109	5.070	-.0014	.9132
SDev	.006	.095	.0008	.0065
%RSD	.1239	1.870	-59.81	.7166
#1	5.114	5.002	-.0020	.9085
#2	5.105	5.137	-.0008	.9178

Method: ICAP1 Sample Name: ICV-5 Operator: JM
Run Time: 05/14/91 10:10:39
Comment: SOLUTION 050291
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0100	.0207	-.0092	.0000	.0001	-.0013	.0102
SDev	.0350	.0074	.0200	.0000	.0013	.0025	.0072
%RSD	-350.6	35.59	-216.2	.0000	2254.	-190.8	70.67
#1	.0147	.0155	-.0233	.0000	-.0009	-.0031	.0153
#2	-.0347	.0259	.0049	.0000	.0010	.0005	.0051

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0005	.0045	.0000	.0157	.0069	.0351	.0184
SDev	.0030	.0013	.0010	.0013	.0032	.0024	.0007
%RSD	581.2	28.40	31060.	8.310	45.98	6.798	3.536
#1	.0026	.0054	-.0007	.0166	.0046	.0368	.0189
#2	-.0016	.0036	.0007	.0148	.0091	.0334	.0180

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0032	.0000	.0005	.2976	-.0058	-.0004	.0000
SDev	.0065	.2190	.0023	.0888	.0098	.0002	.0008
%RSD	-201.8	420e6	451.2	29.84	-169.7	-49.64	12330.
#1	-.0078	.1548	.0021	.2348	.0012	-.0002	.0006
#2	.0014	-.1548	-.0011	.3604	-.0127	-.0005	-.0006

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0048	.0000	.1120	-.0061	.0192	.0008	30.20
SDev	.0002	.001	.0053	.0029	.0115	.0005	.23
%RSD	3.796	-1324e6	4.765	-47.21	59.92	57.85	1.143
#1	.0049	.0008	.1158	-.0041	.0111	.0011	30.04
#2	.0046	-.0008	.1083	-.0081	.0273	.0005	30.37

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0225	.0271	.0000	.0170
SDev	.0167	.0540	.000	.0153
%RSD	36.71	199.1	-17870.	89.99
#1	-.0313	.0653	-.0003	.0277
#2	-.0135	-.0111	.0003	.0062

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Method: ICAP1 Sample Name: ICB Operator: JM
Run Time: 05/14/91 10:18:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0495	.0181	.0360	.0000	.0003	-.0001	.0000
SDev	.0249	.0110	.0130	.0000	.0009	.0019	.0072
%RSD	-50.29	60.62	36.16	.0000	275.1	-2342.	175200.
#1	-.0319	.0103	.0453	.0000	.0010	.0013	.0051
#2	-.0671	.0258	.0268	.0000	-.0003	-.0014	-.0051

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0005	.0009	-.0007	-.0005	.0023	-.0026	-.0014
SDev	.0015	.0013	.0000	.0007	.0031	.0218	.0013
%RSD	-278.8	141.6	-.2753	-141.5	132.9	-849.3	-94.24
#1	.0005	.0000	-.0007	.0000	.0045	.0129	-.0005
#2	-.0016	.0018	-.0007	-.0009	.0001	-.0180	-.0023

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0019	-.1548	-.0008	-.5101	-.0393	-.0013	.0000
SDev	.0058	.1011	.0004	.2136	.0093	.0011	.0008
%RSD	-313.3	-65.27	-45.84	-41.88	-23.57	-86.47	9118.
#1	.0023	-.0834	-.0006	-.3591	-.0327	-.0021	-.0006
#2	-.0060	-.2263	-.0011	-.6612	-.0458	-.0005	.0006

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0011	-.0041	-.0448	-.0061	.0163	.0000	.0215
SDev	.0048	.0023	.1109	.0029	.0000	.0000	.0261
%RSD	425.7	-56.57	-247.5	-47.19	.2049	.0000	121.3
#1	-.0023	-.0025	.0336	-.0041	.0163	.0000	.0399
#2	.0045	-.0057	-.1232	-.0081	.0163	.0000	.0031

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0180	.0264	-.0003	.0004
SDev	.0044	.0334	.0000	.0006
%RSD	25.37	126.6	-1.133	140.7
#1	.0135	.0500	-.0003	.0008
#2	.0225	.0028	-.0003	.0000

0000043

Method: ICAP1 Sample Name: CRI Operator: JM
Run Time: 05/14/91 10:22:08
Comment: CRDL-1,LOT 3-40AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0093	.1382	-.0047	.0000	.0105	.0093	.0178
SDev	.0272	.0110	.0547	.0000	.0000	.0014	.0108
%RSD	-291.7	7.961	-1155.	.0000	.0403	14.92	60.83
#1	.0099	.1460	.0339	.0000	.0105	.0084	.0254
#2	-.0286	.1304	-.0434	.0000	.0105	.0103	.0101

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0183	.1059	.0483	-.0019	.0010	-.0090	.0286
SDev	.0030	.0038	.0000	.0013	.0160	.0364	.0007
%RSD	16.20	3.630	.0043	-67.94	1544.	-402.0	2.268
#1	.0203	.1086	.0484	-.0029	.0123	.0167	.0290
#2	.0162	.1032	.0483	-.0010	-.0102	-.0348	.0281

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0839	-.5360	.0197	-1.097	-.0223	.0979	.0396
SDev	.0052	.2695	.0004	1.611	.0387	.0010	.0000
%RSD	6.218	-50.28	1.944	-146.8	-173.1	.9880	.0455
#1	.0876	-.3454	.0195	.0420	.0050	.0986	.0396
#2	.0802	-.7265	.0200	-2.237	-.0497	.0972	.0396

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0052	-.0025	-.1361	.0000	.0683	.0001	.3322
SDev	.0048	.0046	.0370	.0057	.0501	.0001	.0129
%RSD	91.99	-188.6	-27.21	157700.	73.36	35.36	3.890
#1	.0086	-.0057	-.1099	-.0041	.0329	.0001	.3231
#2	.0018	.0008	-.1623	.0041	.1038	.0002	.3414

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0045	.0279	.0003	-.0027
SDev	.0127	.0358	.0009	.0016
%RSD	281.3	128.3	293.8	-62.09
#1	.0135	.0026	-.0003	-.0015
#2	-.0045	.0532	.0009	-.0038

Method: ICAP1 Sample Name: ICSA Operator: JM
Run Time: 05/14/91 10:24:10
Comment: INT-A1,LOT 3-10AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	495.1	.1147	-.4260	.0080	-.0001	-.0022	502.4
SDev	.7	.0181	.0521	.0000	.0005	.0005	.2
%RSD	.1355	15.77	-12.24	.0000	-461.2	-24.25	.0344
#1	494.7	.1275	-.3892	.0080	.0002	-.0018	502.6
#2	495.6	.1019	-.4629	.0080	-.0004	-.0026	502.3

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0000	-.0035	-.0096	184.6	.0394	511.3	.0071
SDev	.004	.0064	.0019	.4	.0070	.2	.0012
%RSD	-10430.	-184.1	-20.01	.1950	17.70	.0426	16.85
#1	.0026	.0010	-.0109	184.9	.0443	511.4	.0063
#2	-.0027	-.0080	-.0082	184.4	.0344	511.1	.0080

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0061	-.0834	-.0003	-1.433	.1830	.0101	-.0040
SDev	.0298	.1684	.0007	.170	.0087	.0014	.0007
%RSD	484.7	-202.0	-284.9	-11.89	4.764	13.74	-18.74
#1	-.0149	-.2025	-.0008	-1.313	.1891	.0111	-.0045
#2	.0272	.0357	.0003	-1.554	.1768	.0092	-.0035

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0574	-.0008	-.0761	.0181	.3769	.0124	.3563
SDev	.0078	.0000	.1045	.0001	.0457	.0003	.0073
%RSD	-13.63	.0000	-137.4	.2988	12.14	1.997	2.052
#1	-.0629	-.0008	-.0022	.0182	.4093	.0122	.3615
#2	-.0518	-.0008	-.1500	.0181	.3446	.0126	.3511

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0159	.1760	-.0023	.0002
SDev	.0257	.0845	.0013	.0005
%RSD	161.5	48.00	-55.33	321.0
#1	.0341	.1163	-.0032	.0005
#2	-.0023	.2358	-.0014	-.0002

Method: ICAP1 Sample Name: ICSAB Operator: JM
Run Time: 05/14/91 10:26:53
Comment: INT-A1,LOT 3-10AS & INT-B1,LOT 3-19AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	493.9	.0922	-.4690	.4786	.4744	.9274	498.5
SDev	2.7	.0293	.0787	.0013	.0064	.0166	7.6
%RSD	.5414	31.81	-16.78	.2721	1.351	1.788	1.519
#1	495.8	.1130	-.5247	.4795	.4789	.9391	503.9
#2	492.0	.0715	-.4134	.4777	.4698	.9157	493.2

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.4448	.4617	.4507	182.7	.9685	508.6	.4541
SDev	.0044	.0113	.0019	2.2	.0044	4.0	.0063
%RSD	.9931	2.452	.4226	1.192	.4524	.7794	1.376
#1	.4480	.4697	.4521	184.3	.9716	511.4	.4585
#2	.4417	.4537	.4494	181.2	.9654	505.8	.4497

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.8916	-.4288	.9336	-1.877	.1421	.4742	.8908
SDev	.0143	.2527	.0102	.656	.0218	.0059	.0115
%RSD	1.618	-58.93	1.087	-34.97	15.33	1.238	1.291
#1	.8917	-.2501	.9407	-1.413	.1267	.4783	.8989
#2	.8715	-.6074	.9264	-2.341	.1575	.4700	.8827

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0922	-.0016	-.1743	.0200	.4113	.0125	.2971
SDev	.0313	.0012	.1797	.0033	.0092	.0002	.0218
%RSD	-34.19	-70.71	-103.1	16.67	2.225	1.192	7.347
#1	-.0699	-.0008	-.0472	.0224	.4048	.0126	.3125
#2	-.1145	-.0025	-.3013	.0176	.4178	.0124	.2816

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0329	.1813	-.0020	-.0014
SDev	.0433	.0364	.0007	.0010
%RSD	-131.4	20.05	-36.46	-71.22
#1	-.0023	.2070	-.0015	-.0007
#2	-.0635	.1556	-.0025	-.0022

Method: ICAP1 Sample Name: CCV1 Operator: JM
Run Time: 05/14/91 10:30:52
Comment: SOLUTION 041691
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.027	2.045	2.086	1.002	.9939	1.003	51.23
SDev	.017	.044	.011	.010	.0147	.008	.44
%RSD	1.684	2.141	.5417	.9962	1.480	.7706	.8657
#1	1.014	2.014	2.094	.9952	.9835	.9980	50.92
#2	1.039	2.076	2.078	1.009	1.004	1.009	51.55

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9962	1.024	1.001	1.076	1.005	25.24	.9923
SDev	.0074	.005	.008	.006	.031	.24	.0078
%RSD	.7449	.4976	.7690	.5476	3.132	.9402	.7883
#1	.9909	1.020	.9959	1.071	1.027	25.07	.9868
#2	1.001	1.027	1.007	1.080	.9827	25.41	.9978

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.9927	50.24	.9220	52.11	48.78	1.012	1.997
SDev	.0241	.32	.0123	.14	.20	.014	.014
%RSD	2.423	.6370	1.331	.2777	.4120	1.375	.6818
#1	1.010	50.01	.9307	52.01	48.64	1.002	1.988
#2	.9757	50.46	.9133	52.22	48.92	1.021	2.007

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9848	.9820	26.08	1.004	1.060	1.024	.2906
SDev	.0035	.0046	.01	.011	.031	.009	.0255
%RSD	.3510	.4710	.0391	1.143	2.926	.9037	8.774
#1	.9824	.9787	26.07	.9959	1.038	1.018	.2725
#2	.9873	.9853	26.09	1.012	1.082	1.031	.3086

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.017	10.17	1.007	1.523
SDev	.038	.05	.009	.021
%RSD	.7552	.4554	.8923	1.360
#1	4.994	10.14	1.001	1.508
#2	5.040	10.21	1.014	1.537

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Method: ICAP1 Sample Name: CCB1 Operator: JM
Run Time: 05/14/91 10:35:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0031	.0155	-.0031	.0000	.0003	-.0005	.0153
SDev	.0090	.0145	.0329	.0000	.0009	.0001	.0000
%RSD	-284.2	93.71	-1057.	.0000	274.0	-24.34	.0122
#1	.0032	.0258	.0201	.0000	.0010	-.0005	.0153
#2	-.0095	.0052	-.0264	.0000	-.0003	-.0004	.0153

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0005	-.0018	.0007	.0448	-.0157	.0120	-.0005
SDev	.0015	.0000	.0000	.0033	.0222	.0108	.0000
%RSD	-278.6	-.6169	.0725	7.286	-141.0	90.14	-.0575
#1	-.0016	-.0018	.0007	.0471	-.0314	.0196	-.0005
#2	.0005	-.0018	.0007	.0425	.0000	.0043	-.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0037	-.5241	.0022	-.9601	-.0250	-.0012	.0000
SDev	.0227	.1853	.0015	.2556	.0054	.0013	.0007
%RSD	-617.4	-35.36	70.99	-26.63	-21.76	-112.2	137100.
#1	-.0197	-.6551	.0011	-.7793	-.0289	-.0021	-.0005
#2	.0124	-.3930	.0033	-1.141	-.0212	-.0002	.0005

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0002	-.0033	-.0859	-.0041	.0385	.0000	.0133
SDev	.0096	.0035	.0000	.0000	.0231	.0001	.0059
%RSD	4109.	-106.1	-.0158	-.2036	60.07	282.8	43.87
#1	-.0065	-.0057	-.0860	-.0041	.0549	.0000	.0092
#2	.0070	-.0008	-.0859	-.0040	.0222	.0001	.0175

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0180	.0045	-.0003	.0008
SDev	.0318	.0169	.0009	.0011
%RSD	176.9	375.4	-282.5	142.1
#1	-.0045	-.0074	-.0009	.0000
#2	.0404	.0165	.0003	.0015

0000048

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Method: ICAP1 Sample Name: ICP-AT BLANK Operator: JM
Run Time: 05/14/91 10:43:17
Comment: ICP-AT 090591 B
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0015	.0052	-.0559	.0000	.0003	-.0003	.0918
SDev	.0429	.0220	.0244	.0000	.0009	.0013	.0000
%RSD	2769.	426.1	-43.67	.0000	269.3	-393.2	.0046
#1	-.0288	-.0104	-.0387	.0000	-.0003	-.0013	.0918
#2	.0319	.0207	-.0732	.0000	.0010	.0006	.0918

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0042	-.0009	.0007	.0471	-.0023	.0291	-.0005
SDev	.0022	.0013	.0019	.0013	.0031	.0036	.0000
%RSD	-53.32	-142.0	283.2	2.772	-138.0	12.43	-.7048
#1	-.0026	.0000	-.0007	.0462	-.0045	.0317	-.0004
#2	-.0058	-.0018	.0020	.0480	-.0001	.0265	-.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0064	-.1191	.0005	-.1428	.1363	-.0019	.0113
SDev	.0020	.2527	.0008	.3406	.0180	.0004	.0008
%RSD	-30.43	-212.1	142.5	-238.4	13.18	-19.45	6.915
#1	-.0078	.0596	.0000	.0980	.1491	-.0016	.0108
#2	-.0050	-.2978	.0011	-.3837	.1236	-.0021	.0119

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0081	-.0049	-.0262	.0000	.0113	.0001	.2251
SDev	.0080	.0012	.1056	.0057	.0231	.0001	.0072
%RSD	98.15	-23.57	-402.8	87200.	203.3	35.36	3.195
#1	.0138	-.0057	-.1009	.0041	-.0050	.0001	.2201
#2	.0025	-.0041	.0485	-.0041	.0277	.0002	.2302

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0180	-.0234	-.0012	-.0004
SDev	.0190	.0113	.0004	.0005
%RSD	-105.9	-48.43	-35.71	-137.5
#1	-.0314	-.0154	-.0015	.0000
#2	-.0045	-.0314	-.0009	-.0008

0000019

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Method: ICAP1 Sample Name: ICP-AT DCS Operator: JM
Run Time: 05/14/91 10:44:44
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

090591 B

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.856	.5002	1.963	1.875	.0493	.0475	98.26
SDev	.032	.0146	.055	.002	.0000	.0014	.71
%RSD	1.705	2.917	2.807	.1158	.0001	2.987	.7193
#1	1.879	.5105	1.924	1.873	.0493	.0485	98.76
#2	1.834	.4899	2.002	1.876	.0493	.0465	97.76

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1893	.4797	.2390	.9738	.4905	50.64	.4725
SDev	.0022	.0000	.0019	.0072	.0222	.11	.0007
%RSD	1.177	.0001	.8065	.7378	4.524	.2129	.1380
#1	.1909	.4797	.2376	.9788	.5062	50.72	.4730
#2	.1878	.4797	.2404	.9687	.4748	50.57	.4720

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4695	48.50	.0513	99.41	93.29	.4698	.4813
SDev	.0013	.08	.0004	.16	.12	.0002	.0040
%RSD	.2720	.1736	.7480	.1625	.1238	.0395	.8323
#1	.4686	48.44	.0511	99.52	93.21	.4699	.4841
#2	.4704	48.56	.0516	99.30	93.37	.4697	.4785

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0165	-.0025	-.0638	-.0089	-.0027	.0225	.2969
SDev	.0032	.0046	.0421	.0029	.0731	.0000	.0072
%RSD	19.06	-188.6	-65.97	-32.40	-2705.	.0000	2.423
#1	.0143	-.0057	-.0936	-.0068	-.0544	.0225	.2918
#2	.0188	.0008	-.0341	-.0109	.0490	.0225	.3020

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.629	-.0133	-.0022	-.0015
SDev	.038	.0297	.0004	.0005
%RSD	.8227	-222.2	-18.13	-36.31
#1	4.656	-.0343	-.0025	-.0011
#2	4.602	.0076	-.0019	-.0019

0000050

Analysis Report Tue 05-14-91 10:48:03 AM page

Method: ICAP1 Sample Name: ICP-AT DCS Operator: JM
Run Time: 05/14/91 10:46:36 90591 B
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.738	.4923	1.812	1.770	.0466	.0445	93.18
SDev	.014	.0256	.108	.009	.0005	.0017	.70
%RSD	.7785	5.193	5.932	.5151	.9977	3.775	.7508
#1	1.748	.5104	1.888	1.776	.0469	.0457	93.67
#2	1.729	.4742	1.736	1.763	.0462	.0433	92.68

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1789	.4572	.2281	.9230	.4540	48.07	.4490
SDev	.0007	.0013	.0019	.0085	.0032	.18	.0039
%RSD	.4081	.2817	.8453	.9198	.6968	.3780	.8702
#1	.1794	.4563	.2295	.9290	.4563	48.20	.4518
#2	.1783	.4581	.2267	.9170	.4518	47.94	.4462

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4520	46.21	.0493	94.57	88.03	.4491	.4588
SDev	.0052	.05	.0000	.37	.23	.0004	.0040
%RSD	1.156	.1093	.0021	.3954	.2667	.0788	.8713
#1	.4483	46.18	.0493	94.83	88.19	.4489	.4617
#2	.4557	46.25	.0493	94.30	87.86	.4494	.4560

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0130	-.0025	-.0333	-.0110	.0185	.0214	.2855
SDev	.0016	.0046	.0211	.0057	.0115	.0003	.0116
%RSD	11.79	-188.6	-63.36	-52.35	62.29	1.159	4.058
#1	.0119	.0008	-.0164	-.0150	.0104	.0215	.2937
#2	.0141	-.0057	-.0482	-.0069	.0266	.0212	.2773

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.405	.0200	-.0021	.0004
SDev	.025	.0433	.0000	.0000
%RSD	.5766	215.9	-1.127	1.271
#1	4.423	.0506	-.0021	.0004
#2	4.387	-.0105	-.0021	.0004

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Method: ICAP1 Sample Name: 1363704 Operator: JM
Run Time: 05/14/91 10:49:06
Comment: ICP-CLPR-A
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0400	.0000	-.0016	.0055	.0010	-.0007	.2853
SDev	.0293	.0146	.0045	.0000	.0000	.0007	.0216
%RSD	73.14	30000.	-287.7	.0000	.9699	-93.88	7.583
#1	.0193	-.0103	.0016	.0055	.0010	-.0012	.3006
#2	.0607	.0104	-.0048	.0055	.0010	-.0002	.2700

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0005	.0025	.0062	2.598	.0018	.1062	.0213
SDev	.0045	.0013	.0019	.007	.0158	.0158	.0000
%RSD	-836.4	51.75	31.27	.2516	880.4	14.82	.0120
#1	.0026	.0016	.0048	2.603	.0130	.1174	.0213
#2	-.0037	.0034	.0075	2.594	-.0094	.0951	.0213

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0063	.1191	.0018	.2400	.1648	.0014	.0153
SDev	.0007	.1853	.0015	.3832	.0289	.0013	.0008
%RSD	10.60	155.6	84.95	159.7	17.51	93.86	5.170
#1	.0068	.2501	.0007	.5109	.1853	.0024	.0148
#2	.0058	-.0119	.0029	-.0310	.1444	.0005	.0159

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0163	-.0025	-.0251	.0005	.0415	.0004	.3440
SDev	.0016	.0069	.1426	.0000	.0155	.0001	.0158
%RSD	9.517	-282.8	-567.5	.3522	37.23	11.79	4.604
#1	.0152	-.0074	.0757	.0005	.0525	.0004	.3328
#2	.0174	.0025	-.1260	.0005	.0306	.0005	.3552

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0045	.0364	.0009	.0015
SDev	.0000	.0234	.0000	.0011
%RSD	.2639	64.18	.2370	75.78
#1	.0045	.0199	.0009	.0022
#2	.0045	.0529	.0009	.0007

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Method: ICAP1 Sample Name: 1363704S Operator: JM
Run Time: 05/14/91 10:51:11
Comment: ICP-CLPR-A
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.856	.5106	1.965	1.883	.0501	.0455	99.75
SDev	.041	.0000	.022	.010	.0005	.0007	1.14
%RSD	2.189	.0071	1.134	.5304	.9625	1.615	1.142
#1	1.828	.5106	1.981	1.876	.0505	.0450	98.95
#2	1.885	.5106	1.949	1.890	.0498	.0460	100.6

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1946	.4894	.2445	3.531	.5149	51.40	.4980
SDev	.0007	.0064	.0019	.022	.0001	.47	.0059
%RSD	.3723	1.306	.7894	.6291	.0281	.9192	1.177
#1	.1941	.4849	.2431	3.515	.5148	51.06	.4938
#2	.1951	.4939	.2458	3.547	.5150	51.73	.5021

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4831	49.52	.0532	101.5	93.78	.4839	.4859
SDev	.0000	.25	.0019	1.2	.84	.0021	.0048
%RSD	.0020	.5102	3.630	1.204	.8945	.4353	.9825
#1	.4831	49.34	.0518	100.6	93.18	.4824	.4825
#2	.4831	49.70	.0545	102.3	94.37	.4853	.4893

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0236	.0000	-.0741	-.0003	.0331	.0233	.5315
SDev	.0049	.001	.0633	.0086	.0194	.0003	.1274
%RSD	20.67	-1324e6	-85.42	-2950.	58.74	1.276	23.97
#1	.0201	-.0008	-.1189	.0058	.0193	.0231	.4414
#2	.0270	.0008	-.0294	-.0064	.0468	.0235	.6216

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.737	.0600	-.0009	.0019
SDev	.076	.0232	.0013	.0000
%RSD	1.609	38.66	-142.6	.3795
#1	4.683	.0436	-.0019	.0019
#2	4.791	.0764	.0000	.0019

0000054

Analysis Report Tue 05-14-91 10:57:51 AM page 1

Method: ICAP1 Sample Name: 1363704D Operator: JM
Run Time: 05/14/91 10:55:32
Comment: ICP-CLPR-A
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0064	.0181	-.0231	.0000	.0010	-.0016	.2037
SDev	.0271	.0110	.0174	.0000	.0000	.0006	.0072
%RSD	421.4	60.71	-75.18	.0000	.9926	-38.50	3.540
#1	.0256	.0259	-.0108	.0000	.0010	-.0011	.2088
#2	-.0127	.0103	-.0354	.0000	.0010	-.0020	.1986

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0032	.0043	.0041	2.580	.0019	.0779	.0204
SDev	.0007	.0013	.0010	.020	.0031	.0097	.0000
%RSD	-23.14	29.85	23.47	.7853	164.3	12.46	.0088
#1	-.0026	.0034	.0048	2.594	.0041	.0848	.0204
#2	-.0037	.0052	.0034	2.565	-.0003	.0711	.0204

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0029	-.0357	.0018	.3773	.0901	.0014	.0064
SDev	.0032	.1684	.0000	.0411	.0016	.0010	.0008
%RSD	-112.0	-471.4	.3129	10.89	1.813	68.66	12.26
#1	-.0006	-.1548	.0018	.4064	.0890	.0021	.0069
#2	-.0052	.0834	.0018	.3482	.0913	.0007	.0058

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0173	-.0016	-.0587	.0004	.0250	.0005	.3552
SDev	.0033	.0012	.0634	.0057	.0153	.0001	.0203
%RSD	19.06	-70.71	-108.0	1292.	61.03	10.10	5.708
#1	.0196	-.0008	-.1035	-.0036	.0142	.0005	.3696
#2	.0150	-.0025	-.0139	.0045	.0358	.0005	.3409

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0180	.0636	.0000	.0007
SDev	.0191	.0128	.0004	.0000
%RSD	106.1	20.19	18550.	.7964
#1	.0314	.0727	.0003	.0007
#2	.0045	.0545	-.0003	.0007

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Method: ICAP1 Sample Name: ICP-SD BLANK Operator: JM
Run Time: 05/14/91 10:58:32
Comment: ICP-SD 090591 C
Mode: CONC Corr. Factor: 200

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-3.526	3.099	-5.568	.0000	.0666	-.3548	10.71
SDev	.464	1.461	9.218	.0000	.1887	.1106	2.16
%RSD	-13.17	47.15	-165.5	.0000	283.2	-31.18	20.19
#1	-3.854	4.132	.9499	.0000	-.0668	-.2765	12.24
#2	-3.198	2.066	-12.09	.0000	.2000	-.4330	9.181

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.4202	.0008	.1362	3.787	-1.338	.6817	.0009
SDev	.7438	.0006	.0006	.653	1.897	.2451	.1297
%RSD	-177.0	80.84	.4019	17.23	-141.8	35.95	13850.
#1	.1058	.0003	.1358	4.249	-2.679	.3550	-.0908
#2	-.9461	.0012	.1366	3.326	.0040	.5084	.0927

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.8328	-16.67	-.1088	-67.59	-2.311	-.1866	.7925
SDev	1.0391	40.43	.0021	59.29	2.070	.3371	.0032
%RSD	-124.8	-242.4	-1.911	-87.71	-89.57	-180.6	.4078
#1	-.0981	-45.26	-.1074	-25.67	-3.775	.0517	.7908
#2	-1.568	11.91	-.1103	-109.5	-.8474	-.4250	.7947

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0170	-.4906	-16.44	.0003	7.662	.0210	21.08
SDev	.0020	.0000	3.18	1.149	1.525	.0000	.58
%RSD	11.79	.0000	-19.32	335900.	19.90	.0000	2.752
#1	.0184	-.4906	-18.69	.8127	6.584	.0210	21.49
#2	.0155	-.4906	-14.20	-.8120	8.740	.0210	20.67

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.491	8.013	-.1212	-.1552
SDev	2.537	.940	.2566	.2171
%RSD	56.49	11.74	-211.7	-139.9
#1	2.684	7.348	-.3026	-.3088
#2	6.297	8.677	.0602	-.0017

0000056

Method: ICAP1 Sample Name: ICP-S DCS Operator: JM
Run Time: 05/14/91 11:10:22 090591 C
Comment: ICP-S
Mode: CONC Corr. Factor: 100

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	183.6	50.80	199.1	186.2	4.730	4.615	9789.
SDev	9.3	.37	.6	.5	.089	.190	61.
%RSD	5.047	.7369	.3040	.2799	1.891	4.111	.6263
#1	190.1	50.53	199.6	186.5	4.666	4.749	9745.
#2	177.0	51.06	198.7	185.8	4.793	4.481	9832.

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	19.46	48.88	24.04	94.70	49.08	5066.	47.57
SDev	.22	.26	.19	.33	2.87	2.	.26
%RSD	1.144	.5240	.8008	.3456	5.841	.0432	.5489
#1	19.62	48.70	24.17	94.47	47.05	5065.	47.39
#2	19.30	49.06	23.90	94.93	51.10	5068.	47.76

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	47.30	4876.	5.107	9985.	9234.	47.35	47.22
SDev	1.43	25.	.075	8.	11.	.28	.24
%RSD	3.012	.5181	1.476	.0799	.1186	.5935	.5152
#1	46.49	4894.	5.160	9990.	9241.	47.16	47.40
#2	48.51	4858.	5.054	9979.	9226.	47.55	47.05

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9594	-.3271	3.690	-.8873	-.0220	2.216	55.19
SDev	.3192	.1156	1.582	.2677	3.8561	.010	.00
%RSD	33.27	-35.36	42.87	-32.42	-17540.	.4468	.0053
#1	1.185	-.2453	4.208	-1.091	-2.749	2.209	55.19
#2	.7327	-.4088	2.571	-.6838	2.705	2.223	55.18

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	485.4	2.902	-.2210	-.0724
SDev	.3	3.155	.1456	.0551
%RSD	.0687	108.7	-80.58	-76.07
#1	484.5	5.132	-.3536	-.0335
#2	486.3	.6708	-.1887	-.1113

ethod: ICAP1 Sample Name: ICP-S DCS Operator: JM
un Time: 05/14/91 11:13:47
omment: ICP-S 090591
ode: CONC Corr. Factor: 100

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	186.4	50.27	199.7	185.8	4.699	4.426	9712.
SDev	.7	1.10	5.1	1.6	.137	.057	141.
%RSD	.3671	2.186	2.529	.8410	2.921	1.284	1.452
#1	185.9	51.05	203.3	187.0	4.796	4.466	9812.
#2	186.9	49.49	196.2	184.7	4.602	4.386	9613.

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	19.14	48.43	23.49	94.79	48.39	5028.	46.93
SDev	.37	.64	.19	.85	.65	30.	.65
%RSD	1.932	1.318	.8210	.8958	1.352	.5879	1.388
#1	19.41	48.88	23.63	95.39	48.85	5049.	47.39
#2	18.88	47.97	23.35	94.19	47.93	5007.	46.47

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	45.94	4813.	4.889	9872.	9159.	47.11	46.72
SDev	.52	13.	.076	8.	113.	.10	.16
%RSD	1.128	.2800	1.556	.0830	1.235	.2063	.3354
#1	46.30	4823.	4.835	9879.	9239.	47.18	46.83
#2	45.57	4803.	4.942	9866.	9079.	47.04	46.61

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.6229	-.2453	-15.32	-.2796	2.435	2.184	17.20
SDev	.1596	.2313	1.06	.5733	.381	.025	.43
%RSD	25.63	-94.28	-6.918	-205.0	15.63	1.133	2.525
#1	.7358	-.4088	-16.07	-.6850	2.166	2.202	17.51
#2	.5100	-.0818	-14.57	.1258	2.704	2.167	16.90

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	481.3	1.117	-.3144	-.1122
SDev	1.9	1.902	.0053	.1077
%RSD	.3959	170.4	-1.700	-96.05
#1	482.7	2.462	-.3107	-.1884
#2	480.0	-.2285	-.3182	-.0360

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Method: ICAP1 Sample Name: 1363701 Operator: JM
Run Time: 05/14/91 11:22:29
Comment: ICP-CLPR-S
Mode: CONC Corr. Factor: 200

needs Dilution

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	5535.	6.185	-9.199	18.79	.1659	.2273	614.8
SDev	43.	.018	2.034	.00	.0026	.5280	2.9
%RSD	.7754	.2972	-22.11	.0000	1.545	232.3	.4692
#1	5565.	6.198	-10.64	18.79	.1641	.6007	616.9
#2	5504.	6.172	-7.760	18.79	.1678	-.1460	612.8

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.4079	.8130	10.70	1537.	55280.	143.8	4.883
SDev	.0097	1.024	.39	1.	106.	4.4	.133
%RSD	2.368	125.9	3.605	.0661	.1915	3.034	2.722
#1	.4011	1.537	10.43	1537.	55350.	146.8	4.789
#2	.4148	.0890	10.97	1536.	55200.	140.7	4.976

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.5509	469.3	.8645	404.8	169.6	5.248	10180.
SDev	.0039	13.5	.6131	176.0	6.4	.264	31.
%RSD	.6997	2.872	70.92	43.48	3.789	5.026	.3062
#1	.5536	478.8	.4310	529.3	174.2	5.434	10200.
#2	.5482	459.7	1.298	280.3	165.1	5.061	10160.

Elem	S	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	12.88	2.126	101.6	-.5444	14.33	9.577	648.5
SDev	.32	1.388	8.3	.0002	5.41	.030	.9
%RSD	2.489	65.27	8.178	-.0348	37.77	.3101	.1335
#1	13.11	1.145	95.72	-.5442	18.16	9.598	647.9
#2	12.66	3.107	107.5	-.5445	10.51	9.556	649.1

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	11.13	17.05	66.59	7.192
SDev	4.37	14.71	.17	.000
%RSD	37.32	86.22	.2544	.0008
#1	8.671	6.649	66.47	7.192
#2	15.68	27.45	66.71	7.192

Method: ICAP1 Sample Name: CCV-2 Operator: JM
Run Time: 05/14/91 11:28:47
Comment: SOLUTION 041691
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.006	2.058	2.077	.9784	.9751	.9920	50.84
SDev	.010	.018	.002	.0013	.0045	.0032	.34
%RSD	.9874	.8961	.1031	.1331	.4635	.3192	.6596
#1	1.013	2.071	2.076	.9793	.9719	.9897	50.60
#2	.9985	2.044	2.079	.9774	.9783	.9942	51.08

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9815	1.000	.9912	1.022	1.011	25.21	.9831
SDev	.0074	.000	.0010	.003	.003	.04	.0052
%RSD	.7575	.0009	.0969	.3208	.3122	.1580	.5304
#1	.9762	1.000	.9905	1.024	1.009	25.18	.9794
#2	.9867	1.000	.9918	1.020	1.013	25.24	.9868

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.9740	49.55	.9070	51.33	47.19	.9978	1.981
SDev	.0324	.05	.0012	.54	.18	.0057	.008
%RSD	3.330	.1020	.1331	1.046	.3855	.5659	.4083
#1	.9969	49.51	.9062	50.95	47.32	.9928	1.975
#2	.9510	49.58	.9079	51.71	47.06	1.002	1.987

Elem	B	LI	P	MO	SE	SR	SIDE
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9654	.9526	25.72	.9918	1.041	1.008	.2555
SDev	.0014	.0046	.17	.0057	.019	.001	.0039
%RSD	.1488	.4856	.6568	.5771	1.852	.0688	1.537
#1	.9644	.9493	25.60	.9878	1.027	1.008	.2537
#2	.9664	.9558	25.84	.9959	1.054	1.009	.2582

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.084	10.11	.9962	1.519
SDev	.025	.03	.0008	.013
%RSD	.4995	.2912	.0844	.8605
#1	5.066	10.14	.9968	1.528
#2	5.102	10.09	.9956	1.509

ethod: ICAP1 Sample Name: CCB-2 Operator: JM
un Time: 05/14/91 11:39:03
omment:
ode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0207	.0181	-.0418	.0000	.0010	-.0004	.0026
SDev	.0202	.0037	.0043	.0000	.0000	.0013	.0036
%RSD	-97.92	20.30	-10.27	.0000	1.273	-341.6	140.8
#1	-.0064	.0155	-.0387	.0000	.0010	.0005	.0000
#2	-.0350	.0207	-.0448	.0000	.0010	-.0013	.0051

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0047	.0027	-.0007	.0106	.0203	.0094	.0000
SDev	.0045	.0013	.0000	.0020	.0159	.0291	.0007
%RSD	-94.26	46.87	-.3448	18.42	78.43	310.6	51770.
#1	-.0079	.0018	-.0007	.0092	.0090	-.0112	-.0005
#2	-.0016	.0036	-.0007	.0120	.0315	.0300	.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0124	-.1429	.0019	.1070	-.0262	-.0012	.0063
SDev	.0104	.2527	.0004	1.014	.0191	.0017	.0016
%RSD	-83.61	-176.8	20.01	948.4	-72.79	-141.3	25.03
#1	-.0178	-.3216	.0022	-.6103	-.0397	-.0024	.0051
#2	-.0051	.0357	.0016	.8242	-.0127	.0000	.0074

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0022	.0000	-.0522	-.0041	.0436	.0000	-.0010
SDev	.0064	.001	.0052	.0057	.0155	.0000	.0144
%RSD	-288.9	-1324e6	-10.00	-141.5	35.46	.0000	-1435.
#1	.0063	.0008	-.0559	-.0081	.0327	.0000	.0092
#2	-.0107	-.0008	-.0485	.0000	.0546	.0000	-.0112

Elem	TH	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0045	.0355	-.0009	.0015
SDev	.0000	.0015	.0009	.0011
%RSD	-.1464	-.3304	-94.16	71.51
#1	-.0045	.0366	-.0003	.0008
#2	-.0045	.0344	-.0015	.0023

Method: ICAP1 **Sample Name: 1363701** Operator: JM
Run Time: 05/14/91 11:41:29
Comment: ICP-CLPR-S
Mode: CONC Corr. Factor: 1000

5X

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	5683.	1.678	16.57	19.65	.9696	-.8390	637.3
SDev	68.	3.739	21.51	.00	.0127	.6119	14.4
%RSD	1.192	222.8	129.8	.0000	1.308	-72.93	2.263
#1	5730.	4.321	31.79	19.65	.9607	-.4064	627.1
#2	5635.	-.9658	1.361	19.65	.9786	-1.272	647.5

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-1.597	1.535	10.84	1573.	55780.	155.0	4.776
SDev	4.458	.003	.96	3.	130.	16.9	.003
%RSD	-279.2	.2159	8.894	.1662	.2329	10.91	.0552
#1	-4.749	1.533	10.16	1571.	55870.	143.1	4.774
#2	1.556	1.538	11.52	1575.	55680.	167.0	4.778

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-1.950	178.7	.6412	-526.3	128.6	2.811	10560.
SDev	9.079	67.4	.0057	892.3	21.2	1.307	1.
%RSD	-465.5	37.71	.8941	-169.5	16.51	46.51	.0073
#1	4.470	131.0	.6453	-1157.	113.6	3.735	10560.
#2	-8.370	226.3	.6372	104.7	143.7	1.887	10560.

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	12.37	1.635	94.81	-3.787	62.62	9.206	1435.
SDev	6.40	1.156	10.37	.002	42.38	.000.	19.
%RSD	51.78	70.71	10.94	-.0653	67.68	.0000	1.308
#1	7.839	.8177	87.46	-3.785	32.65	9.206	1448.
#2	16.89	2.453	102.1	-3.788	92.59	9.206	1422.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	16.52	59.87	67.44	6.110
SDev	6.38	10.69	.00	.009
%RSD	38.64	17.85	.0008	.1429
#1	12.00	67.43	67.44	6.103
#2	21.03	52.32	67.44	6.116

0000062

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Method: ICAP1 Sample Name: 13637015 Operator: JM
Run Time: 05/14/91 11:43:50
Comment: ICP-CLPR-S
Mode: CONC Corr. Factor: 1000

5X needs Bigger Dilution

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	6358.	100.0	427.9	401.5	10.44	8.495	21300.
SDev	102.	11.0	2.9	1.7	.03	1.265	209.
%RSD	1.600	11.02	.6799	.4325	.2465	14.89	.9821
#1	6430.	107.8	425.8	402.8	10.42	7.601	21440.
#2	6286.	92.24	430.0	400.3	10.45	9.389	21150.

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	41.85	102.5	64.62	1854.	121800.	10890.	105.3
SDev	1.46	2.6	.00	18.	1236.	92.	.0
%RSD	3.497	2.490	.0053	.9473	1.014	.8460	.0014
#1	42.89	104.3	64.62	1867.	122700.	10950.	105.3
#2	40.82	100.7	64.63	1842.	121000.	10820.	105.3

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	106.0	10850.	10.89	21480.	19190.	104.6	8763.
SDev	6.5	101.	.78	46.	231.	3.0	85.
%RSD	6.099	.9314	7.166	.2128	1.204	2.869	.9662
#1	110.6	10920.	11.44	21520.	19350.	106.7	8823.
#2	101.5	10780.	10.33	21450.	19030.	102.4	8704.

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	8.895	-.8177	82.42	-3.499	35.77	14.21	3748.
SDev	.096	2.3127	127.4	5.749	22.86	.15	165.
%RSD	1.082	-282.8	154.6	-164.3	63.91	1.045	4.945
#1	8.963	.8177	172.5	.5664	19.61	14.32	3880.
#2	8.827	-2.453	-7.686	-7.564	51.94	14.11	3617.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1090.	55.42	70.36	9.284
SDev	13.	5.35	1.29	1.089
%RSD	1.182	9.651	1.833	11.73
#1	1099.	59.21	71.28	10.05
#2	1081.	51.64	69.45	8.515

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Method: ICAP1 Sample Name: 13637015 Operator: JM
Run Time: 05/14/91 12:14:15
Comment: ICP-CLPR-S
Mode: CONC Corr. Factor: 2000

10X

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	6244.	66.36	425.6	402.1	11.46	11.68	21170.
SDev	50.	14.60	61.9	.9	.06	2.43	72.
%RSD	.8000	22.00	14.54	.2159	.5203	20.79	.3406
#1	6280.	56.04	381.9	401.5	11.42	9.962	21120.
#2	6209.	76.68	469.4	402.8	11.50	13.40	21230.

Elem	CR	CO	CU	FE	PB ✓	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	41.33	102.5	61.22	1828.	121000.	10690.	103.9
SDev	4.44	7.7	.01	20.	416.	29.	.0
%RSD	10.74	7.502	.0091	1.071	.3455	.2715	.0086
#1	44.46	108.0	61.22	1814.	120700.	10710.	103.9
#2	38.19	97.09	61.22	1842.	121300.	10670.	103.9

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	91.88	10810.	5.977	20140.	18860.	99.23	3623.
SDev	11.61	977.	4.584	1644.	214.	7.20	16.
%RSD	12.64	9.034	76.70	8.163	1.132	7.254	.1807
#1	83.67	11510.	2.736	21300.	19010.	104.3	3611.
#2	100.1	10120.	9.219	18970.	18710.	94.14	3634.

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	6.482	-6.541	-70.93	.5482	62.76	14.00	3680.
SDev	22.26	11.563	369.59	11.49	15.15	.30	145.
%RSD	343.5	-176.8	-521.0	2096.	24.13	2.121	3.939
#1	22.23	-14.72	190.4	-7.578	73.47	13.79	3782.
#2	-9.251	1.635	-332.3	8.675	52.05	14.21	3577.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1112.	-37.17	67.95	6.968
SDev	13.	96.19	1.72	3.297
%RSD	1.142	-258.8	2.525	47.27
#1	1103.	-105.2	69.16	7.293
#2	1121.	30.84	66.74	4.644

0000064

ethod: ICAP1 Sample Name: 1363701D Operator: JM
un Time: 05/14/91 12:20:48
omment: ICP-CLPR-S
ode: CONC Corr. Factor: 1000

5X

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	6023.	22.51	-10.98	19.65	.9392	-1.651	662.7
SDev	38.	10.93	17.79	.00	.0163	.716	.0
%RSD	.6381	48.58	-161.9	.0000	1.733	-43.36	.0002
#1	6050.	14.78	-23.56	19.65	.9507	-1.145	662.7
#2	5996.	30.24	1.591	19.65	.9277	-2.158	662.7

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.3718	2.351	11.52	2021.	72030.	200.5	5.773
SDev	.0047	3.233	.00	2.	146.	1.2	.002
%RSD	1.255	163.2	.0057	.0969	.2025	.5941	.0368
#1	.3685	5.065	11.52	2023.	72140.	199.6	5.771
#2	.375	-.3625	11.52	2020.	71930.	201.3	5.774

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.6791	416.9	.4091	214.8	113.2	6.744	10960.
SDev	5.205	.0	.3761	248.4	27.8	1.496	3.
%RSD	766.5	.0000	91.93	115.6	24.53	22.19	.0290
#1	4.360	416.9	.6750	390.4	132.7	5.686	10970.
#2	-3.002	416.9	.1432	39.17	93.59	7.802	10960.

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	12.36	.0000	53.94	-1.678	37.09	9.171	1514.
SDev	3.19	1.156	79.07	2.868	38.51	.050	124.
%RSD	25.84	-1293e6	146.6	-170.9	103.8	.5398	8.223
#1	14.62	-.8177	-1.970	-3.706	9.863	9.206	1426.
#2	10.10	.8177	109.9	.3501	64.32	9.136	1602.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	81.30	79.05	94.95	8.794
SDev	25.39	16.71	.43	.547
%RSD	19.2	21.13	.4520	6.224
#1	99.26	67.23	95.25	9.181
#2	3.347	90.86	94.64	8.407

ethod: ICAP1 **Sample Name:** 1363702 Operator: JM
un Time: 05/14/91 12:32:47
omment: ICP-CLPR-S
ode: CONC **Corr. Factor:** 200

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	8737.	.4842	-5.715	7.183	.1565	.1901	162.5
SDev	28.	2.922	5.904	.087	.0044	.0144	2.2
%RSD	.3260	603.5	-103.3	1.209	2.819	7.587	1.331
#1	8717.	-1.582	-1.540	7.122	.1596	.1799	161.0
#2	8757.	2.551	-9.889	7.245	.1534	.2008	164.0

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	6.295	1.195	2.615	1088.	226.5	68.02	3.539
SDev	.148	.512	.192	5.	3.8	.96	.000
%RSD	2.348	42.82	7.343	.4203	1.678	1.415	.0076
#1	6.191	.8331	2.479	1085.	223.9	67.34	3.539
#2	6.400	1.557	2.751	1091.	229.2	68.70	3.539

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	1.245	164.4	.0787	128.9	37.75	5.706	321.7
SDev	1.308	60.6	.1557	63.9	1.20	.564	2.1
%RSD	105.1	36.89	197.8	49.55	3.175	9.884	.6464
#1	2.170	121.5	-.0314	83.72	36.90	5.307	320.3
#2	.3197	207.2	.1886	174.0	38.59	6.105	323.2

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	9.289	1.145	40.15	-1.029	8.940	1.750	1066.
SDev	.984	.463	25.32	.574	1.484	.050	4.
%RSD	10.59	40.41	63.08	-55.80	16.60	2.928	.3516
#1	8.594	.8177	58.05	-1.435	9.990	1.715	1069.
#2	9.985	1.472	22.24	-.6231	7.890	1.785	1063.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-3.455	17.26	83.32	5.910
SDev	2.549	11.87	.26	.327
%RSD	-73.78	68.75	.3065	5.535
#1	-1.653	8.870	83.14	5.679
#2	-5.257	25.65	83.50	6.141

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Method: ICAP1 Sample Name: 1363702L Operator: JM
Run Time: 05/14/91 12:35:20
Comment: ICP-CLPR-S 5x serial Dilution
Mode: CONC Corr. Factor: 1000

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	8723.	3.037	-44.12	9.210	.9482	-1.198	170.7
SDev	90.	3.705	24.71	.000	.0144	.045	10.8
%RSD	1.034	122.0	-56.00	.0000	1.515	-3.736	6.334
#1	8659.	.4179	-26.65	9.210	.9380	-1.229	178.3
#2	8787.	5.657	-61.60	9.210	.9584	-1.166	163.0

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	4.517	1.562	1.252	1090.	231.1	87.34	2.251
SDev	5.953	2.560	2.891	13.	6.2	23.00	.003
%RSD	131.8	164.0	231.0	1.199	2.681	26.33	.1323
#1	8.727	3.372	-.7926	1081.	226.7	103.6	2.253
#2	.3075	-.2489	3.296	1100.	235.4	71.08	2.249

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-5.180	-47.64	-1.554	33.61	-2.696	4.973	324.0
SDev	.029	387.41	.763	464.4	6.536	1.866	.8
%RSD	-.5660	-813.2	-49.10	1381.	-242.4	37.52	.2520
#1	-5.159	226.3	-2.093	362.0	1.926	6.292	324.6
#2	-5.200	-321.6	-1.015	-294.8	-7.318	3.654	323.4

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	8.855	-3.271	20.75	2.217	31.32	1.715	1044.
SDev	4.740	1.156	31.70	8.611	3.91	.198	19.
%RSD	53.53	-35.36	152.8	388.3	12.50	11.54	1.792
#1	12.21	-2.453	-1.668	8.306	28.56	1.575	1031.
#2	5.503	-4.088	43.16	-3.871	34.09	1.855	1057.

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.917	14.37	81.93	6.135
SDev	12.68	38.10	.85	1.097
%RSD	661.3	265.2	1.040	17.88
#1	-7.047	-12.57	81.33	6.910
#2	10.88	41.31	82.54	5.359

Method: ICAP1 Sample Name: CRI Operator: JM
Run Time: 05/14/91 12:41:10
Comment: CRDL-1,LOT 3-40AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0219	.1201	-.0420	.0000	.0104	.0094	.0331
SDev	.0134	.0073	.0286	.0000	.0000	.0027	.0036
%RSD	-61.39	6.068	-68.25	.0000	.0963	28.04	10.91
#1	-.0124	.1150	-.0622	.0000	.0104	.0113	.0305
#2	-.0314	.1253	-.0217	.0000	.0105	.0076	.0356

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0188	.1113	.0477	.0064	.0437	.0320	.0290
SDev	.0037	.0039	.0010	.0026	.0062	.0291	.0000
%RSD	19.67	3.457	2.008	40.90	14.19	90.69	.0155
#1	.0162	.1086	.0483	.0082	.0481	.0115	.0290
#2	.0214	.1140	.0470	.0045	.0394	.0526	.0290

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0770	-.0357	.0227	.5457	-.0273	.1007	.3425
SDev	.0071	.1348	.0000	.9743	.0044	.0007	.0008
%RSD	9.271	-377.1	.0263	178.5	-15.93	.7029	1.942
#1	.0821	.0596	.0227	-.1432	-.0243	.1012	.3417
#2	.0720	-.1310	.0227	1.235	-.0304	.1002	.3430

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0109	-.0025	-.0091	.0000	.0139	.0001	.3068
SDev	.0032	.0000	.0687	.0115	.0040	.0001	.0059
%RSD	29.04	.0000	-755.4	390200.	28.47	70.71	1.911
#1	.0087	-.0025	-.0577	.0091	.0167	.0001	.3026
#2	.0131	-.0025	.0395	-.0081	.0111	.0000	.3109

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0045	.0754	-.0009	.0000
SDev	.0127	.0030	.0009	.0011
%RSD	-282.9	3.939	-92.33	2373.
#1	-.0135	.0775	-.0015	-.0007
#2	.0045	.0733	-.0003	.0008

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Method: ICAP1   Sample Name: ICSA   Operator: JM
Run Time: 05/14/91 12:46:39
Comment: INT-A1,LOT ~~3408S~~ (SPEX) 3-104AS
Mode: CONC   Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	492.0	.0759	-.3250	.0077	-.0004	-.0045	494.4
SDev	6.7	.0218	.0803	.0004	.0001	.0007	7.6
%RSD	1.353	28.76	-24.71	5.657	-14.19	-14.70	1.535
#1	487.3	.0913	-.3818	.0074	-.0004	-.0049	489.1
#2	496.7	.0604	-.2682	.0080	-.0004	-.0040	499.8

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0031	-.0097	-.0082	182.8	.0260	507.2	.0087
SDev	.0066	.0049	.0020	2.3	.0146	6.9	.0010
%RSD	-211.9	-51.16	-24.69	1.282	56.16	1.362	11.87
#1	-.0078	-.0132	-.0067	181.2	.0364	502.3	.0094
#2	.0016	-.0062	-.0096	184.5	.0157	512.1	.0079

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0011	-.5836	.0010	-3.059	.1479	.0058	-.0008
SDev	.0046	.5390	.0006	.086	.0202	.0066	.0005
%RSD	431.4	-92.36	58.14	-2.809	13.63	114.8	-68.43
#1	-.0022	-.9647	.0006	-3.120	.1337	.0011	-.0004
#2	.0043	-.2025	.0014	-2.998	.1622	.0105	-.0012

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0674	-.0025	.0234	.0279	.1248	.0118	.2589
SDev	.0004	.0000	.1600	.0149	.0280	.0003	.0060
%RSD	-.6622	.0000	682.2	53.45	22.41	2.092	2.310
#1	-.0677	-.0025	.1365	.0173	.1050	.0117	.2546
#2	-.0671	-.0025	-.0897	.0384	.1446	.0120	.2631

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0680	.1820	-.0026	-.0029
SDev	.0474	.0396	.0007	.0026
%RSD	[illegible]	21.74	-27.77	[illegible]
#1	-.0345	.1540	-.0031	-.0047
#2	-.1016	.2099	-.0021	-.0010

0000069

Method: ICAP1 Sample Name: ICSAB Operator: JM
Run Time: 05/14/91 12:49:35
Comment: INT-A1,LOT 3-10AS & INT-B1,LOT 3-19AS (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	493.1	.0662	-.2006	.4657	.4698	.9351	496.8
SDev	.8	.0072	.0865	.0022	.0009	.0043	.2
%RSD	.1553	10.91	-43.14	.4661	.1975	.4562	.0370
#1	493.7	.0611	-.2618	.4672	.4704	.9320	497.0
#2	492.6	.0713	-.1394	.4642	.4691	.9381	496.7

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.4475	.4599	.4487	183.0	.9891	510.6	.4560
SDev	.0037	.0038	.0029	.4	.0343	.4	.0006
%RSD	.8266	.8277	.6454	.2261	3.471	.0759	.1283
#1	.4501	.4626	.4466	183.3	1.013	510.9	.4556
#2	.4449	.4572	.4507	182.7	.9648	510.4	.4564

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.8793	-.4288	.9366	-2.058	.1271	.4753	.8913
SDev	.0150	.3537	.0011	1.105	.0136	.0001	.0017
%RSD	1.705	-82.50	.1204	-53.71	10.71	.0194	.1920
#1	.8899	-.1797	.9358	-1.276	.1367	.4752	.8901
#2	.8687	-.6789	.9374	-2.839	.1175	.4753	.8925

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0515	.0000	-.0529	.0363	.3046	.0118	.2510
SDev	.0148	.001	.0586	.0028	.0118	.0002	.0260
%RSD	-28.79	-1324e6	-110.8	7.669	3.888	1.679	10.34
#1	-.0410	-.0008	-.0114	.0343	.3130	.0117	.2327
#2	-.0620	.0008	-.0943	.0383	.2962	.0119	.2694

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0123	.2055	-.0018	-.0007
SDev	.0060	.0854	.0017	.0011
%RSD	48.50	41.56	-96.43	-159.8
#1	.0166	.1451	-.0030	.0001
#2	.0081	.2659	-.0006	-.0014

Method: ICAP1 Sample Name: CCV3 Operator: JM
Run Time: 05/14/91 12:52:52
Comment: SOLUTION 041691
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.062	2.055	2.121	.9790	.9821	.9975	51.12
SDev	.013	.022	.005	.0013	.0018	.0072	.14
%RSD	1.200	1.066	.2124	.1330	.1839	.7167	.2681
#1	1.053	2.071	2.125	.9799	.9808	.9924	51.02
#2	1.071	2.040	2.118	.9781	.9834	1.003	51.22

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9930	1.019	.9986	1.089	1.014	25.44	.9886
SDev	.0045	.001	.0039	.008	.013	.06	.0013
%RSD	.4491	.1242	.3855	.7791	1.250	.2284	.1321
#1	.9899	1.018	.9959	1.083	1.005	25.48	.9877
#2	.9962	1.020	1.001	1.095	1.023	25.40	.9896

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.9910	50.32	.9506	53.34	47.16	1.013	1.999
SDev	.0098	.17	.0596	.13	.18	.000	.002
%RSD	.9845	.3347	6.264	.2416	.3858	.0190	.0775
#1	.9841	50.44	.9085	53.43	47.03	1.012	1.998
#2	.9979	50.20	.9927	53.25	47.29	1.013	2.000

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9643	.9452	25.67	1.018	1.025	1.011	.2466
SDev	.0001	.0012	.10	.003	.027	.002	.0192
%RSD	.0102	.1223	.3914	.2821	2.640	.2398	7.803
#1	.9644	.9444	25.74	1.016	1.006	1.013	.2606
#2	.9642	.9460	25.59	1.020	1.044	1.010	.2330

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.035	10.11	.9996	1.498
SDev	.006	.03	.0004	.012
%RSD	.1161	.2685	.0421	.7998
#1	5.039	10.13	.9999	1.506
#2	5.030	10.09	.9993	1.489

Method: ICAP1 Sample Name: CCB3 Operator: JM
Run Time: 05/14/91 12:54:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0288	.0104	-.0329	.0000	.0010	.0006	.0331
SDev	.0181	.0073	.0131	.0000	.0000	.0001	.0180
%RSD	62.79	70.18	-39.76	.0000	.1747	9.464	54.40
#1	.0160	.0052	-.0421	.0000	.0010	.0006	.0459
#2	.0415	.0156	-.0236	.0000	.0010	.0005	.0204

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0031	.0054	.0014	.0933	.0113	.0206	.0000
SDev	.0022	.0026	.0010	.0013	.0096	.0206	.0007
%RSD	-70.85	47.17	70.66	1.400	84.55	100.1	3122.
#1	-.0016	.0072	.0020	.0943	.0181	.0353	-.0004
#2	-.0047	.0036	.0007	.0924	.0046	.0060	.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0096	.0119	.0065	-.6108	-.0258	-.0017	.0056
SDev	.0078	.3369	.0015	.0016	.0044	.0002	.0008
%RSD	80.94	2828.	23.59	-.2666	-16.89	-10.68	14.78
#1	.0151	.2501	.0076	-.6096	-.0227	-.0016	.0050
#2	.0041	-.2263	.0054	-.6119	-.0289	-.0019	.0062

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0063	-.0008	-.0412	.0021	.0772	.0004	.0082
SDev	.0032	.0023	.0422	.0029	.0077	.0004	.0217
%RSD	-50.44	-282.8	-102.3	140.2	10.03	82.50	266.5
#1	-.0086	.0008	-.0114	.0041	.0827	.0007	.0235
#2	-.0041	-.0025	-.0710	.0000	.0717	.0002	-.0072

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0160	.0699	.0003	.0000
SDev	.0190	.0489	.0000	.000
%RSD	106.	69.98	1.685	-30.70
#1	.0045	.1044	.0003	.0000
#2	.0314	.0353	.0003	.0000

ample Name: ICP-AT BLANK Operator: JM
4:07:56 140591 D

actor: 1

3	AS	BA	BE	CD	CA
PM	PPM	PPM	PPM	PPM	PPM
0181	-.0622	.0000	.0003	-.0012	.1402
0027	.0466	.0000	.0009	.0014	.0036
0.16	-74.73	.0000	274.0	-113.8	2.577
0207	-.0951	.0000	.0009	-.0002	.1377
0156	-.0292	.0000	-.0003	-.0022	.1428

3	CU	FE	PB	MG	MN
PM	PPM	PPM	PPM	PPM	PPM
0027	.0027	.0406	.0180	.0223	.0009
013	.0010	.0052	.0190	.0133	.0007
7.08	35.50	12.86	105.5	59.73	70.39
0036	.0020	.0443	.0315	.0317	.0014
0018	.0034	.0369	.0046	.0129	.0005

	AG	NaHi	NaLo	V	ZN
PM	PPM	PPM	ppm	PPM	PPM
.1072	.0062	.0860	.0193	.0008	.0175
.0674	.0011	.3396	.0104	.0045	.0000
52.85	18.10	394.7	53.74	557.1	.0311
.1548	.0054	-.1541	.0266	.0040	.0175
0596	.0070	.3262	.0119	-.0024	.0175

	P	MO	SE	SR	SiO2
M	PPM	PPM	PPM	PPM	PPM
.0008	-.0033	-.0020	.0385	.0005	.1341
.0000	.0105	.0086	.0387	.0001	.0058
000	-272.7	-425.9	100.4	18.36	4.291
.0[illegible]	-.0113	.0041	.0658	.0005	.1300
[illegible]	.0036	-.0081	.0112	.0006	.1382

	TI	ZR
m	PPM	PPM
588	.0018	.0008
359	.0004	.0000
[illegible]	[illegible]	[illegible]
504	.0009	.0008
571	.0013	.0008

Method: ICAP1 Sample Name: ICP-AT DCS Operator: JM
Run Time: 05/14/91 14:10:21 140591 P
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.820	.4899	1.951	1.864	.0506	.0471	97.55
SDev	.029	.0292	.090	.007	.0009	.0004	.39
%RSD	1.614	5.966	4.627	.3494	1.750	.8836	.3955
#1	1.840	.4693	1.887	1.868	.0512	.0468	97.82
#2	1.799	.5106	2.015	1.859	.0499	.0474	97.28

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1872	.4860	.2404	.9650	.5243	50.14	.4753
SDev	.0067	.0038	.0000	.0026	.0127	.40	.0020
%RSD	3.568	.7885	.0001	.2711	2.426	.7998	.4106
#1	.1920	.4888	.2404	.9668	.5333	50.42	.4766
#2	.1825	.4833	.2404	.9631	.5153	49.85	.4739

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4805	48.54	.0511	96.93	91.34	.4780	.4937
SDev	.0052	.37	.0015	1.36	.23	.0040	.0008
%RSD	1.085	.7635	2.972	1.402	.2546	.8394	.1665
#1	.4842	48.80	.0500	97.89	91.18	.4758	.4931
#2	.4768	48.27	.0521	95.96	91.31	.4702	.4943

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0041	-.0033	-.0601	-.0028	.0381	.0218	.1342
SDev	.0048	.0012	.0052	.0000	.0231	.0002	.0115
%RSD	118.2	-35.36	-8.720	-.3497	60.51	.6799	8.575
#1	.0007	-.0025	-.0564	-.0028	.0218	.0219	.1260
#2	.0074	-.0041	-.0638	-.0028	.0544	.0217	.1423

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.337	-.0198	-.0028	-.0004
SDev	.025	.0107	.0004	.0000
%RSD	.5262	-54.24	-15.68	-4.093
#1	4.345	-.0273	-.0025	-.0003
#2	4.309	-.0122	-.0031	-.0004

Method: ICAP1 Sample Name: ICP-AT DCS Operator: JM
Run Time: 05/14/91 14:15:41 140591 D
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.807	.5105	1.965	1.852	.0506	.0471	98.40
SDev	.075	.0000	.027	.003	.0009	.0032	.14
%RSD	4.130	.0068	1.366	.1875	1.844	6.729	.1466
#1	1.860	.5105	1.946	1.855	.0499	.0448	98.30
#2	1.754	.5106	1.984	1.850	.0512	.0493	98.50

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1883	.4843	.2404	.9594	.5019	50.57	.4734
SDev	.0022	.0039	.0000	.0013	.0254	.00	.0007
%RSD	1.183	.7944	.0005	.1365	5.063	.0047	.1382
#1	.1899	.4870	.2404	.9585	.5198	50.57	.4729
#2	.1867	.4815	.2404	.9604	.4839	50.57	.4739

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4708	48.70	.0521	99.24	91.38	.4709	.4931
SDev	.0097	.03	.0015	.64	.22	.0013	.0000
%RSD	2.062	.0692	2.939	.6405	.2355	.2809	.0061
#1	.4640	48.73	.0511	99.69	91.53	.4718	.4932
#2	.4777	48.68	.0532	98.79	91.22	.4699	.4931

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0013	-.0008	-.0863	-.0068	.0898	.0222	.2007
SDev	.0112	.0023	.0001	.0000	.0424	.0001	.0015
%RSD	833.8	-282.8	-.1073	-.0618	47.18	.4468	.7597
#1	.0097	-.0025	-.0862	-.0068	.0598	.0221	.2017
#2	-.0061	.0008	-.0864	-.0068	.1197	.0222	.1996

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	4.845	.0162	-.0025	-.0011
SDev	.038	.0396	.0009	.0011
%RSD	.7853	244.1	-34.46	-97.22
#1	4.872	-.0118	-.0031	-.0004
#2	4.819	.0442	-.0019	-.0019

Method: ICAP1 Sample Name: 13891-01 Operator: JM
Run Time: 05/14/91 14:22:04
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0192	.0077	-.0312	.0028	-.0003	.0001	.1912
SDev	.0046	.0183	.0022	.0039	.0000	.0007	.0469
%RSD	24.12	236.3	-7.019	141.4	-5.311	882.1	24.51
#1	.0224	.0207	-.0297	.0055	-.0003	.0006	.2244
#2	.0159	-.0052	-.0328	.0000	-.0003	-.0004	.1581

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0011	.0027	.0048	.0309	.0202	.0659	.0009
SDev	.0052	.0038	.0000	.0020	.0160	.0364	.0007
%RSD	-492.9	141.2	.0255	6.341	78.98	55.20	70.12
#1	.0026	.0054	.0048	.0323	.0315	.0916	.0014
#2	-.0047	.0000	.0048	.0295	.0089	.0402	.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0078	.0476	.0044	.5976	.2149	.0011	.0164
SDev	.0091	.1853	.0008	.8909	.0430	.0015	.0000
%RSD	-115.9	388.9	17.44	149.1	20.02	139.8	.1800
#1	-.0014	.1787	.0049	1.229	.2453	.0000	.0164
#2	-.0143	-.0834	.0038	-.0324	.1845	.0021	.0164

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0047	-.0033	-.0936	.0020	.0494	.0005	.1351
SDev	.0000	.0012	.0845	.0029	.0077	.0001	.0305
%RSD	.1019	-35.36	-90.33	140.9	15.62	10.10	22.56
#1	.0047	-.0041	-.0338	.0000	.0548	.0005	.1567
#2	.0047	-.0025	-.1533	.0041	.0439	.0005	.1136

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0045	.0528	.0000	.0000
SDev	.0000	.0117	.0004	.001
%RSD	.0111	22.06	18280.	-20110.
#1	.0045	.0446	.0003	.0008
#2	.0045	.0611	-.0003	-.0008

Method: ICAP1 Sample Name: 13891-01MS Operator: JM
Run Time: 05/14/91 14:24:19
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.808	.4977	1.933	1.849	.0499	.0481	98.48
SDev	.018	.0184	.064	.000	.0000	.0018	.60
%RSD	.9985	3.690	3.304	.0000	.0549	3.645	.6115
#1	1.821	.5107	1.887	1.849	.0499	.0469	98.91
#2	1.796	.4847	1.978	1.849	.0499	.0494	98.05

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1914	.4906	.2417	.9604	.5199	50.82	.4748
SDev	.0007	.0026	.0019	.0065	.0126	.24	.0039
%RSD	.3869	.5207	.7971	.6808	2.420	.4627	.8235
#1	.1920	.4924	.2404	.9650	.5110	50.98	.4776
#2	.1909	.4888	.2431	.9557	.5288	50.65	.4720

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4837	49.21	.0508	100.4	92.01	.4738	.4925
SDev	.0188	.22	.0004	.7	.27	.0028	.0009
%RSD	3.889	.4449	.7301	.7203	.2913	.5949	.1733
#1	.4970	49.06	.0505	100.9	91.82	.4753	.4919
#2	.4704	49.37	.0511	99.87	92.20	.4718	.4931

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0594	-.0033	-.0043	-.0048	.0571	.0224	.1526
SDev	.0096	.0035	.0529	.0029	.0038	.0001	.0116
%RSD	16.17	-106.1	-1236.	-60.03	6.569	.2210	7.600
#1	.0662	-.0057	.0331	-.0028	.0545	.0224	.1608
#2	.0526	-.0008	-.0417	-.0068	.0598	.0224	.1444

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.034	-.0020	-.0016	-.0003
SDev	.013	.0201	.0004	.0000
%RSD	.3817	-988.5	-26.97	-.2358
#1	-.045	.0121	-.0013	-.0003
#2	-.063	-.0162	-.0019	-.0003

Method: ICAP1 Sample Name: 13891-01DU Operator: JM
Run Time: 05/14/91 14:26:00
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0160	.0052	-.0511	.0043	-.0003	.0006	.2142
SDev	.0542	.0073	.0128	.0000	.0000	.0026	.0361
%RSD	-339.9	140.1	-25.04	.0000	-4.074	440.3	16.84
#1	.0224	.0000	-.0421	.0043	-.0003	.0024	.2397
#2	-.0543	.0104	-.0602	.0043	-.0003	-.0012	.1887

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0011	.0000	.0027	.0282	.0157	.0437	-.0005
SDev	.0022	.003	.0010	.0020	.0030	.0291	.0000
%RSD	-207.6	-91710.	35.22	6.958	19.39	66.54	-.1076
#1	-.0026	-.0018	.0034	.0295	.0178	.0643	-.0005
#2	.0005	.0018	.0020	.0268	.0135	.0231	-.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0005	-.0715	.0019	-.0696	.2477	-.0016	.0198
SDev	.0013	.1179	.0004	.1302	.0490	.0015	.0016
%RSD	288.6	-165.0	20.56	-187.1	19.79	-95.58	8.039
#1	.0014	-.1548	.0022	-.1617	.2823	-.0005	.0209
#2	-.0003	.0119	.0016	.0225	.2130	-.0026	.0186

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0080	-.0033	-.0860	-.0101	.0410	.0004	.1116
SDev	.0016	.0012	.0000	.0029	.0039	.0001	.0087
%RSD	20.23	-35.36	-.0012	-28.31	9.504	25.71	7.782
#1	.0092	-.0041	-.0860	-.0081	.0438	.0003	.1054
#2	.0069	-.0025	-.0860	-.0122	.0383	.0005	.1177

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0043	-.0015	-.0012	.0004
SDev	.0254	.0181	.0004	.0005
%RSD	588.9	-1191.	-35.94	133.1
#1	.0224	-.0143	-.0009	.0008
#2	-.0135	.0113	-.0015	.0000

Method: ICAP1 Sample Name: 13592-01 Operator: JM
Run Time: 05/14/91 14:27:41
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1679	.0047	.0036	.0807	.0010	-.0003	78.13
SDev	.0002	.0074	.0418	.0030	.0001	.0040	.81
%RSD	.0893	156.3	1174.	3.764	4.781	-1193.	1.034
#1	.1680	.0099	-.0260	.0829	.0009	.0025	78.70
#2	.1678	-.0005	.0331	.0786	.0010	-.0032	77.56

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0005	.0062	.0266	1.407	.0155	14.56	1.172
SDev	.0015	.0013	.0000	.007	.0095	.13	.012
%RSD	-269.6	20.39	.0019	.4643	61.07	.9152	1.056
#1	.0005	.0071	.0266	1.412	.0088	14.66	1.181
#2	-.0016	.0053	.0266	1.403	.0222	14.47	1.164

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0007	2.632	.0036	47.97	43.36	.0022	.0435
SDev	.0091	.101	.0011	1.61	.17	.0055	.0008
%RSD	1303.	3.840	31.18	3.357	.4007	251.9	1.761
#1	.0071	2.704	.0028	49.10	43.48	.0060	.0441
#2	-.0057	2.561	.0044	46.83	43.24	-.0017	.0430

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1753	.0049	-.0002	-.0015	.0337	.3978	14.23
SDev	.0015	.0012	.0475	.0029	.0579	.0031	.11
%RSD	.8796	23.57	-20220.	-194.1	171.5	.7716	.7742
#1	.1742	.0057	.0334	.0006	.0747	.3999	14.30
#2	.1764	.0041	-.0339	-.0035	-.0072	.3956	14.15

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0090	.0475	.0031	.0007
SDev	.0064	.0109	.0005	.0022
%RSD	70.76	23.02	14.76	302.1
#1	.0135	.0398	.0034	.0023
#2	.0045	.0552	.0028	-.0008

Method: ICAP1 Sample Name: 13592-01MS Operator: JM
Run Time: 05/14/91 14:30:33
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.970	.5023	1.924	1.941	.0486	.0473	178.3
SDev	.036	.0109	.038	.022	.0000	.0021	.8
%RSD	1.833	2.176	1.951	1.118	.0224	4.381	.4469
#1	1.944	.4945	1.950	1.925	.0486	.0459	177.8
#2	1.995	.5100	1.897	1.956	.0486	.0488	178.9

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1951	.4877	.2676	2.317	.4926	66.24	1.659
SDev	.0045	.0089	.0019	.002	.0129	.41	.008
%RSD	2.283	1.833	.7199	.0844	2.624	.6236	.5104
#1	.1919	.4814	.2690	2.316	.4835	65.95	1.653
#2	.1982	.4941	.2662	2.319	.5017	66.54	1.665

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.4849	52.31	.0444	149.2	137.5	.4716	.5236
SDev	.0006	.64	.0027	1.4	2.3	.0013	.0024
%RSD	.1304	1.219	6.069	.9061	1.700	.2768	.4590
#1	.4854	52.06	.0463	148.3	135.8	.4725	.5219
#2	.4845	52.97	.0425	150.2	139.1	.4706	.5253

Elem	B	LI	P	MO	SE	SR	TI2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1598	.0025	.0663	-.0022	.0332	.4313	14.55
SDev	.0112	.0023	.0370	.0000	.0038	.0013	.04
%RSD	7.015	94.28	55.89	-.4071	11.44	.2961	.3086
#1	.1678	.0041	.0401	-.0022	.0339	.4322	14.52
#2	.1519	.0008	.0925	-.0022	.0306	.4327	14.63

Elem	S	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.998	.0096	-.011	-.0015
SDev	.370	.0148	.0008	.0005
%RSD	-37.11	154.7	-74.21	-34.66
#1	-.899	.0201	-.0003	-.0012
#2	-.997	-.0009	-.0017	-.0019

Method: ICAP1 Sample Name: 13592-01DU Operator: JM
Run Time: 05/14/91 14:32:46
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1343	.0151	-.0009	.0853	.0009	-.0017	80.67
SDev	.0203	.0001	.0087	.0000	.0000	.0006	.34
%RSD	15.14	.3436	-927.5	.0000	1.695	-35.02	.4157
#1	.1199	.0151	-.0071	.0853	.0009	-.0021	80.91
#2	.1487	.0150	.0052	.0853	.0010	-.0013	80.43

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0006	.0008	.0279	1.438	.0109	15.04	1.211
SDev	.0030	.0013	.0019	.001	.0095	.03	.002
%RSD	-536.7	163.5	6.868	.0453	86.87	.2170	.1617
#1	-.0026	.0017	.0293	1.438	.0042	15.02	1.212
#2	.0015	-.0001	.0266	1.439	.0176	15.07	1.210

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0104	2.573	.0017	49.92	44.62	.0033	.0542
SDev	.0149	.185	.0015	.25	.17	.0017	.0017
%RSD	143.8	7.202	88.77	.5028	.3833	51.57	3.048
#1	.0209	3.442	.0028	49.75	44.50	.0044	.0531
#2	-.0002	2.704	.0006	50.10	44.75	.0021	.0554

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1743	.0049	.0146	.0006	.0314	.4121	14.53
SDev	.0064	.0012	.1110	.0058	.0385	.0005	.04
%RSD	3.657	23.57	759.2	1014.	122.7	.1222	.2787
#1	.1698	.0057	-.0629	.0046	.0041	.4113	14.56
#2	.1788	.0041	.0931	-.0035	.0586	.4127	14.51

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0050	.0110	.0008	-.0001
SDev	.0191	.0267	.0004	.0000
%RSD	-381.3	242.6	54.48	-18.58
#1	.0045	.0298	.0011	-.0001
#2	-.0225	-.0079	.0005	.0000

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Method: ICAP1 Sample Name: 13592-02 Operator: JM
Run Time: 05/14/91 14:34:20
Comment: ICP-AT
Mode: CONC Corr. Factor: 1

needs DILUTION

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0145	.0233	.0061	.0706	.0003	.0009	42.96
SDev	.0339	.0255	.0064	.0000	.0010	.0006	.30
%RSD	-233.8	109.7	104.6	.0000	310.6	67.33	.7052
#1	-.0385	.0052	.0016	.0706	-.0004	.0005	42.74
#2	.0095	.0413	.0107	.0706	.0010	.0014	43.17

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0016	-.0010	.0245	.1192	.0000	.9474	.0290
SDev	.0044	.0013	.0010	.0000	.0064	.0062	.0013
%RSD	-280.6	-130.6	3.920	.0011	1154000.	.6445	4.487
#1	.0016	-.0019	.0238	.1192	-.0045	.9515	.0300
#2	-.0047	-.0001	.0252	.1192	.0045	.9431	.0281

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0069	2.596	.0025	2122.	86136.	.0020	.0168
SDev	.0104	.253	.0019	5.	.	.0025	.0008
%RSD	151.7	9.731	77.49	.2360	.0009	122.4	4.585
#1	.0142	2.775	.0011	2118.	86136.	.0038	.0173
#2	-.0005	2.418	.0038	2125.	86136.	.0003	.0162

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0831	.0041	.5093	.0021	.0154	.2305	8.046
SDev	.0016	.0000	.0792	.0029	.0193	.0010	.074
%RSD	1.929	.0000	15.55	139.4	125.5	.4509	.9172
#1	.0819	.0041	.4533	.0000	.0017	.2298	7.994
#2	.0842	.0041	.5653	.0041	.0290	.2313	8.098

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0743	.0312	-.0007	-.0004
SDev	.0000	.0402	.0004	.0005
%RSD	.092	128.5	-62.03	-135.2
#1	.0943	.0034	-.0010	-.0008
#2	.0943	.0602	-.0004	.0000

0000082

Method: ICAP1 Sample Name: CCV-4 Operator: JM
Run Time: 05/14/91 15:08:10
Comment: SOLUTION 051491
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.001	2.050	2.045	.9777	.9923	1.003	51.70
SDev	.030	.000	.081	.0109	.0184	.009	.65
%RSD	3.000	.0024	3.956	1.110	1.856	.8883	1.248
#1	.9800	2.050	1.988	.9701	.9792	.9964	51.25
#2	1.022	2.050	2.102	.9854	1.005	1.009	52.16

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9853	1.023	.9782	1.030	1.014	25.60	.9822
SDev	.0067	.017	.0096	.021	.019	.22	.0143
%RSD	.6764	1.623	.9845	2.030	1.919	.8425	1.460
#1	.9806	1.011	.9714	1.015	1.000	25.44	.9720
#2	.9900	1.035	.9850	1.045	1.028	25.75	.9923

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.9861	49.44	.9721	50.70	45.84	1.000	2.031
SDev	.0038	.64	.0085	.10	.34	.008	.031
%RSD	.3848	1.295	.8707	.1958	.7415	.8101	1.531
#1	.9834	48.99	.9661	50.77	45.60	.9948	2.009
#2	.9887	49.89	.9781	50.63	46.08	1.006	2.053

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9637	.9084	25.99	1.034	1.022	.9916	.1680
SDev	.0209	.0069	.64	.003	.000	.0094	.0264
%RSD	2.170	.7638	2.477	.2785	.0296	.9485	15.74
#1	.9489	.9035	25.54	1.032	1.021	.9850	.1493
#2	.9785	.9133	26.45	1.036	1.022	.9983	.1867

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	9.779	9.804	.9875	.9793
SDev	.007	.127	.0107	.0087
%RSD	.1856	1.299	1.083	.8915
#1	9.774	9.714	.9800	.9731
#2	9.784	9.894	.9951	.9854

Method: ICAP1 Sample Name: CCV-4 (SiO2) Operator: JM
Run Time: 05/14/91 15:12:43
Comments: SOLUTION 050291
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0089	.0156	-.0387	.0000	.0005	.0006	.0077
SDev	.0087	.0000	.0176	.0000	.0010	.0013	.0036
%RSD	-97.75	.0587	-45.38	.0000	224.1	230.7	47.12
#1	-.0028	.0156	-.0263	.0000	.0012	-.0004	.0051
#2	-.0151	.0156	-.0511	.0000	-.0003	.0015	.0102

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0037	.0027	.0014	.0171	.0113	-.0119	.0175
SDev	.0015	.0013	.0010	.0059	.0159	.0230	.0007
%RSD	-39.97	47.27	70.68	34.42	140.4	-192.9	3.720
#1	-.0026	.0036	.0020	.0212	.0225	.0043	.0180
#2	-.0047	.0018	.0007	.0129	.0001	-.0232	.0170

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0119	-.3692	.0032	-.1348	-.0208	-.0022	.0050
SDev	.0020	.0674	.0007	.0065	.0180	.0002	.0016
%RSD	16.44	-18.25	22.14	-4.857	-86.42	-7.810	31.72
#1	.0105	-.3216	.0037	-.1394	-.0081	-.0024	.0062
#2	.0133	-.4169	.0027	-.1302	-.0335	-.0021	.0039

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0018	-.0033	.0186	-.0061	.0437	.0002	20.10
SDev	.0060	.0012	.1161	.0029	.0155	.0002	.53
%RSD	-331.9	-35.26	623.6	-47.14	35.37	113.1	2.633
#1	-.0061	-.0025	.1007	-.0081	.0546	.0003	19.72
#2	.0025	-.0041	-.0635	-.0040	.0328	.0000	20.47

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0359	.0157	-.0009	.0320
SDev	.0319	.0218	.0009	.0279
%RSD	88.88	138.4	-93.93	86.98
#1	.0134	.0312	-.0003	.0516
#2	.0583	.0003	-.0015	.0123

Method: ICAP1 Sample Name: CCB-4 Operator: JM
Run Time: 05/14/91 15:22:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0290	.0026	-.0137	.0000	.0010	-.0023	-.0025
SDev	.0046	.0037	.0219	.0000	.0000	.0013	.0036
%RSD	-15.83	141.1	-159.3	.0000	2.680	-59.38	-141.5
#1	-.0322	.0052	-.0292	.0000	.0010	-.0013	-.0051
#2	-.0257	.0000	.0017	.0000	.0010	-.0032	.0000

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0016	-.0036	-.0014	.0028	.0022	-.0265	-.0014
SDev	.0015	.0000	.0029	.0000	.0093	.0024	.0000
%RSD	-93.52	-.0508	-212.5	.0431	439.6	-9.206	-.2245
#1	-.0005	-.0036	.0007	.0028	-.0046	-.0248	-.0014
#2	-.0026	-.0036	-.0034	.0028	.0089	-.0283	-.0014

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0055	-.5002	.0022	-1.290	-.0998	-.0039	.0000
SDev	.0017	.1179	.0008	.377	.0283	.0032	.002
%RSD	33.04	-23.57	34.97	-29.20	-28.39	-82.16	-23220.
#1	.0068	-.5836	.0027	-1.556	-.1198	-.0061	-.0017
#2	.0041	-.4169	.0016	-1.024	-.0797	-.0016	.0017

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0068	-.0016	.0075	-.0020	.0545	.0000	-.0268
SDev	.0082	.0012	.0263	.0086	.0309	.000	.0101
%RSD	-47.39	-70.71	351.0	-424.7	56.72	-282.8	-37.70
#1	-.0091	-.0025	.0261	-.0081	.0826	-.0001	-.0196
#2	-.0045	-.0008	-.0111	.0041	.0763	.0000	-.0339

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	-.0135	.0659	-.0012	-.0031
SDev	.0187	.0319	.0004	.0011
%RSD	-1.15	183.4	-35.00	-35.02
#1	.0225	.0484	-.0009	-.0039
#2	.0045	.0033	-.0015	-.0023

Method: ICAP1 Sample Name: 13592-02 Operator: JM
Run Time: 05/14/91 15:35:01
Comment: ICP-AT
Mode: CONC Corr. Factor: 2

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0028	.0104	-.0187	.0737	.0020	.0010	43.86
SDev	.0133	.0292	.0308	.0017	.0000	.0001	.58
%RSD	472.5	281.6	-164.4	2.357	.2215	6.279	1.316
#1	-.0066	-.0103	.0030	.0724	.0020	.0009	43.45
#2	.0123	.0310	-.0405	.0749	.0020	.0010	44.27

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0042	.0017	.0245	.0970	-.0134	.9406	.0286
SDev	.0015	.0026	.0019	.0039	.0068	.0146	.0000
%RSD	-34.65	146.8	7.830	4.057	-46.48	1.552	.0120
#1	-.0053	-.0001	.0259	.0942	-.0090	.9509	.0286
#2	-.0032	.0036	.0232	.0998	-.0178	.9303	.0286

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0047	2.096	.0011	2117.	1595.	-.0010	.0134
SDev	.0157	.371	.0031	14.	5.	.0007	.0015
%RSD	-337.1	17.68	280.4	.6573	.3436	-71.53	11.48
#1	.0064	2.358	-.0011	2108.	1591.	-.0005	.0145
#2	-.0158	1.834	.0033	2127.	1599.	-.0015	.0123

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0840	.0000	.4796	-.0162	.0286	.2294	7.741
SDev	.0032	.0116	.0102	.0115	.0231	.0022	.214
%RSD	3.852	.0000	2.156	-70.90	80.58	.9494	2.766
#1	.0863	-.0082	.4869	-.0081	.0193	.2279	7.589
#2	.0817	.0082	.4723	-.0243	.0449	.2310	7.892

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0179	.1033	-.0025	-.0039
SDev	.0281	.1460	.0034	.0033
%RSD	112.3	141.3	-137.8	-84.57
#1	.0448	.0001	-.0049	-.0015
#2	-.0090	.2065	-.0001	-.0062

Method: ICAP1 Sample Name: IDL's # 1 Operator: JM
Run Time: 05/14/91 15:43:18
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1891	.1710	.2297	.0141	.0063	.0263	.1070
SDev	.0227	.0219	.0306	.0000	.0000	.0020	.0000
%RSD	11.99	12.80	13.32	.0000	.0562	7.531	.0015
#1	.2052	.1556	.2514	.0141	.0063	.0249	.1070
#2	.1731	.1865	.2081	.0141	.0063	.0277	.1070

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0241	.0288	.0225	.1520	.1713	.3722	.0208
SDev	.0022	.0026	.0000	.0020	.0127	.0036	.0000
%RSD	9.241	8.875	.0023	1.289	7.389	.9631	.0054
#1	.0257	.0306	.0225	.1506	.1623	.3697	.0208
#2	.0225	.0270	.0225	.1534	.1802	.3747	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1079	3.740	.0219	-.0983	.3151	.0242	.0317
SDev	.0111	.354	.0004	.1301	.0125	.0000	.0016
%RSD	10.24	9.458	1.767	-132.3	3.976	.0213	5.146
#1	.1157	3.990	.0216	-.0063	.3239	.0242	.0306
#2	.1001	3.490	.0222	-.1903	.3062	.0242	.0329

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0289	.1325	.2940	.0285	.5141	.0931	.3681
SDev	.0064	.0012	.0000	.0000	.0308	.0002	.0131
%RSD	22.07	.8730	.0078	.0151	5.995	.1595	1.509
#1	.0334	.1316	.2940	.0285	.4923	.0930	.3773
#2	.0244	.1333	.2940	.0285	.5359	.0932	.3588

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.334	1.836	.0149	.0987
SDev	.057	.018	.0004	.0011
%RSD	3.680	.9794	2.556	1.110
#1	1.313	1.824	.0146	.0994
#2	1.354	1.849	.0152	.0979

Method: ICAP1 Sample Name: IDL's # 2 Operator: JM
Run Time: 05/14/91 15:44:52
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1861	.1762	.2235	.0141	.0063	.0268	.1147
SDev	.0226	.0146	.0221	.0000	.0000	.0013	.0036
%RSD	12.15	8.288	9.896	.0000	.1232	5.001	3.147
#1	.1701	.1865	.2391	.0141	.0063	.0259	.1121
#2	.2021	.1659	.2079	.0141	.0063	.0278	.1172

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0257	.0361	.0245	.1548	.1603	.4073	.0208
SDev	.0000	.0000	.0010	.0007	.0032	.0291	.0000
%RSD	.0317	.0042	3.939	.4217	2.004	7.137	.0128
#1	.0257	.0361	.0238	.1543	.1626	.3868	.0208
#2	.0257	.0361	.0252	.1552	.1580	.4279	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1063	3.728	.0211	.4388	.3305	.0273	.0329
SDev	.0026	.337	.0000	1.148	.0071	.0010	.0016
%RSD	2.441	9.037	.0148	261.7	2.143	3.522	4.859
#1	.1083	3.490	.0211	-.3731	.3255	.0266	.0340
#2	.1047	3.966	.0211	1.251	.3355	.0280	.0317

Elem	S	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0301	.1349	.3013	.0326	.4843	.0944	.8794
SDev	.0048	.0000	.1267	.0057	.0116	.0005	.0202
%RSD	15.95	.0000	42.06	17.63	2.394	.5770	2.301
#1	.0267	.1349	.2117	.0366	.4923	.0946	.8932
#2	.0335	.1349	.3909	.0285	.4761	.0940	.8651

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.599	1.858	.0143	.1006
SDev	.108	.009	.0004	.0006
%RSD	6.754	.4785	2.990	.5456
#1	1.675	1.852	.0146	.1002
#2	1.522	1.865	.0140	.1010

Method: ICAP1 Sample Name: IDL's # 3 Operator: JM
Run Time: 05/14/91 15:47:10
Comment: End QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1686	.1866	.2671	.0141	.0063	.0263	.1147
SDev	.0429	.0000	.0091	.0000	.0000	.0007	.0036
%RSD	25.46	.0166	3.391	.0000	.0247	2.631	3.144
#1	.1989	.1866	.2607	.0141	.0063	.0268	.1172
#2	.1382	.1865	.2735	.0141	.0063	.0258	.1121

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0257	.0361	.0252	.1552	.1491	.3791	.0208
SDev	.0015	.0026	.0019	.0039	.0063	.0303	.0000
%RSD	5.758	7.082	7.650	2.528	4.224	7.998	.0084
#1	.0267	.0379	.0265	.1580	.1447	.4005	.0208
#2	.0246	.0343	.0238	.1525	.1536	.3576	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1111	3.716	.0216	.2899	.2827	.0260	.0323
SDev	.0065	.118	.0008	.4265	.0300	.0002	.0008
%RSD	5.831	3.173	3.550	147.1	10.60	.6733	2.573
#1	.1157	3.799	.0222	.5915	.2615	.0259	.0317
#2	.1065	3.633	.0211	-.0117	.3039	.0261	.0329

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0222	.1341	.3133	.0265	.4679	.0942	.8774
SDev	.0032	.0012	.0581	.0029	.0039	.0002	.0000
%RSD	14.45	.8623	18.60	10.82	.8292	.2153	.0008
#1	.0244	.1349	.2714	.0243	.4706	.0944	.8774
#2	.0199	.1333	.3552	.0285	.4651	.0940	.8774

Elem	BI	TL	V	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0199	1.849	.0143	.1010
SDev	.39	.019	.0013	.0000
%RSD	1.94	1.014	9.240	.0055
#1	1.350	1.863	.0152	.1010
#2	1.340	1.836	.0134	.1010

Method: ICAP1 Sample Name: IDL's #4 Operator: JM
Run Time: 05/14/91 15:48:37
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.2037	.1943	.2560	.0141	.0063	.0281	.1121
SDev	.0113	.0183	.0153	.0000	.0000	.0007	.0000
%RSD	5.566	9.424	5.965	.0000	.2600	2.377	.0013
#1	.1957	.1814	.2452	.0141	.0063	.0286	.1121
#2	.2116	.2072	.2668	.0141	.0062	.0276	.1121

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0236	.0316	.0265	.1566	.1579	.3910	.0212
SDev	.0015	.0013	.0019	.0046	.0063	.0012	.0007
%RSD	6.296	4.049	7.250	2.920	3.976	.3152	3.078
#1	.0246	.0306	.0252	.1534	.1624	.3902	.0208
#2	.0225	.0325	.0279	.1599	.1535	.3919	.0217

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1000	3.752	.0219	.0539	.3077	.0288	.0306
SDev	.0052	.034	.0004	.3397	.0163	.0015	.0000
%RSD	5.170	.8979	1.716	629.8	5.310	5.198	.0849
#1	.0964	3.776	.0232	-.1863	.2962	.0277	.0306
#2	.1037	3.728	.0216	.2941	.3193	.0298	.0306

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0267	.1415	.2565	.0265	.5087	.0945	.8697
SDev	.0064	.0000	.0633	.0029	.0309	.0003	.0203
%RSD	23.99	.0000	24.67	10.85	6.071	.3148	2.331
#1	.0222	.1415	.3118	.0245	.4869	.0943	.8840
#2	.0312	.1415	.2012	.0285	.5306	.0946	.8553

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.117	.911	.0159	.1006
SDev	.019	.026	.0004	.0006
%RSD	1.679	1.244	2.739	.3467
#1	1.603	1.893	.0152	.1010
#2	1.630	1.930	.0158	.1002

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Method: ICAP1 Sample Name: IDL's # 5 Operator: JM
Run Time: 05/14/91 15:49:57
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.2020	.1659	.2622	.0141	.0063	.0249	.1172
SDev	.0269	.0072	.0067	.0000	.0000	.0013	.0144
%RSD	13.31	4.363	2.559	.0000	.3141	5.258	12.31
#1	.1830	.1607	.2670	.0141	.0063	.0258	.1274
#2	.2210	.1710	.2575	.0141	.0063	.0240	.1070

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0246	.0343	.0252	.1543	.1557	.3773	.0203
SDev	.0029	.0051	.0019	.0026	.0287	.0255	.0007
%RSD	11.93	14.94	7.683	1.695	18.41	6.750	3.230
#1	.0267	.0379	.0266	.1562	.1760	.3953	.0198
#2	.0226	.0306	.0238	.1525	.1354	.3593	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1051	3.680	.0219	.3808	.2916	.0252	.0363
SDev	.0019	.438	.0012	1.995	.0218	.0029	.0008
%RSD	1.832	11.90	5.295	524.0	7.473	11.48	2.334
#1	.1064	3.990	.0227	1.792	.3070	.0272	.0317
#2	.1037	3.371	.0211	-1.030	.2762	.0231	.0329

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0255	.1357	.2901	.0285	.4978	.0939	.8651
SDev	.0016	.0012	.0475	.0172	.0076	.0004	.0262
%RSD	6.279	.8519	16.38	60.41	1.524	.4217	3.029
#1	.0267	.1349	.3238	.0163	.5032	.0942	.8836
#2	.0244	.1365	.2565	.0407	.4925	.0936	.8465

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.167	1.903	.0158	.0998
SDev	.064	.031	.0009	.0027
%RSD	4.054	1.636	5.382	2.748
#1	1.612	1.925	.0164	.1018
#2	1.522	1.881	.0152	.0979

0000091

Method: ICAP1 Sample Name: IDL's # 6 Operator: JM
Run Time: 05/14/91 15:52:19
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.1670	.1685	.2578	.0141	.0063	.0249	.1121
SDev	.0180	.0110	.0265	.0000	.0000	.0012	.0000
%RSD	10.78	6.521	10.28	.0000	.2352	4.912	.0008
#1	.1797	.1762	.2390	.0141	.0063	.0241	.1121
#2	.1543	.1607	.2765	.0141	.0063	.0258	.1121

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0241	.0343	.0238	.1571	.1737	.4090	.0208
SDev	.0008	.0026	.0019	.0039	.0094	.0267	.0000
%RSD	3.108	7.480	8.089	2.494	5.430	6.517	.0019
#1	.0236	.0361	.0252	.1599	.1670	.3902	.0208
#2	.0246	.0325	.0225	.1543	.1803	.4279	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.1069	3.645	.0224	.2622	.3128	.0271	.0312
SDev	.0020	.219	.0004	.2135	.0212	.0011	.0008
%RSD	1.829	6.008	1.747	81.44	6.792	4.193	2.552
#1	.1056	3.490	.0227	.1112	.2977	.0279	.0317
#2	.1083	3.799	.0222	.4131	.3278	.0263	.0306

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0290	.1349	.2192	.0305	.4761	.0947	.8846
SDev	.0064	.0023	.0950	.0029	.0077	.0003	.0073
%RSD	22.04	1.714	43.34	9.403	1.623	.3137	.8230
#1	.0333	.1333	.2864	.0285	.4816	.0949	.3794
#2	.0245	.1365	.1520	.0326	.4706	.0945	.3897

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.349	1.875	.0146	.1017
SDev	.038	.007	.0000	.0011
%RSD	2.783	.3754	.0042	1.071
#1	1.376	1.880	.0146	.1010
#2	1.322	1.870	.0146	.1025

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Method: ICAP1 Sample Name: IDL's # 7 Operator: JM
Run Time: 05/14/91 15:53:45
Comment: 2nd QUARTER 1991 DAY 1
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.2068	.1839	.2606	.0141	.0063	.0272	.1096
SDev	.0611	.0110	.0040	.0000	.0000	.0007	.0036
%RSD	29.57	5.983	1.520	.0000	.2964	2.375	3.288
#1	.1636	.1761	.2578	.0141	.0063	.0277	.1070
#2	.25	.1917	.2634	.0141	.0063	.0267	.1121

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0262	.0361	.0231	.1511	.1648	.3773	.0203
SDev	.0022	.0000	.0010	.0007	.0348	.0182	.0007
%RSD	8.475	.0110	4.159	.4327	21.14	4.824	3.199
#1	.0246	.0361	.0225	.1506	.1401	.3644	.0198
#2	.0278	.0361	.0238	.1515	.1894	.3902	.0208

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.0987	3.716	.0205	.2658	.3066	.0261	.0295
SDev	.0071	.286	.0008	.7182	.0060	.0026	.0016
%RSD	7.181	7.706	3.774	270.2	1.954	10.12	5.321
#1	.0937	3.514	.0200	-.2421	.3024	.0242	.0284
#2	.1037	3.919	.0211	.7736	.3108	.0290	.0306

Elem	B	LI	P	MO	SE	SR	SI02
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0312	.1300	.3351	.0285	.4488	.0938	.8733
SDev	.0032	.0023	.1426	.0000	.0462	.0006	.0233
%RSD	10.34	1.779	42.57	.0108	10.30	.6335	2.665
#1	.0289	.1316	.2342	.0285	.4161	.0934	.8568
#2	.0334	.1284	.4359	.0285	.4815	.0942	.8897

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	1.522	1.831	.0146	.0994
SDev	.068	.071	.0009	.0022
%RSD	3.502	3.856	3.795	2.177
#1	1.495	1.781	.0140	.0979
#2	1.549	1.881	.0152	.1010

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Method: ICAP1 Sample Name: CCV-5 Operator: JM
Run Time: 05/14/91 15:56:17
Comment: SOLUTION 051491
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.012	2.086	2.107	.9940	1.014	1.031	53.09
SDev	.046	.007	.038	.0052	.013	.012	.54
%RSD	4.515	.3476	1.794	.5241	1.267	1.140	1.019
#1	.9794	2.091	2.133	.9903	1.005	1.023	52.70
#2	1.044	2.081	2.080	.9977	1.023	1.039	53.47

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.002	1.044	.9980	1.054	1.053	26.32	1.005
SDev	.010	.010	.0048	.004	.022	.21	.008
%RSD	.9611	.9779	.4828	.3732	2.084	.7918	.8428
#1	.9952	1.036	.9946	1.051	1.068	26.17	.9988
#2	1.009	1.051	1.001	1.057	1.037	26.46	1.011

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	1.010	50.68	.9990	52.73	46.30	1.028	2.079
SDev	.005	.07	.0054	.28	.27	.010	.011
%RSD	.5113	.1330	.5413	.5284	.5741	1.010	.5358
#1	1.006	50.63	.9951	52.53	46.11	1.021	2.071
#2	1.013	50.73	1.003	52.92	46.49	1.035	2.087

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9744	.9076	26.56	1.055	1.098	.9932	.1854
SDev	.0080	.0035	.07	.003	.038	.0055	.0163
%RSD	.8252	.3822	.2581	.2717	3.501	.5505	8.775
#1	.9687	.9052	26.51	1.057	1.125	.9943	.1739
#2	.9801	.9101	26.61	1.053	1.071	1.002	.1969

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.251	10.03	1.008	.7250
SDev	.019	.04	.009	.0066
%RSD	.3650	.4116	.8494	.7109
#1	5.238	10.01	1.002	.9184
#2	5.265	10.06	1.014	.9277

0000094

Method: ICAP1 Sample Name: CCV-5 (SiO2) Operator: JM
Run Time: 05/14/91 15:59:11
Comment: SOLUTION 050291
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0040	.0232	.0077	.0071	.0030	-.0005	.1326
SDev	.0460	.0183	.0398	.0004	.0010	.0027	.0505
%RSD	1137.	78.96	513.6	6.149	32.48	-559.9	38.07
#1	.0365	.0103	-.0204	.0074	.0037	.0014	.1683
#2	-.0285	.0362	.0359	.0068	.0023	-.0024	.0969

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0026	.0018	.0027	.0194	-.0066	.0668	.0212
SDev	.0000	.0000	.0010	.0026	.0096	.0302	.0007
%RSD	.5354	.1262	35.21	13.45	-144.2	45.27	3.081
#1	.0026	.0018	.0034	.0212	-.0134	.0882	.0217
#2	.0026	.0018	.0020	.0176	.0001	.0454	.0207

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0005	-.0357	.0043	.0128	.0505	-.0005	.0085
SDev	.0065	.0337	.0007	.4745	.0163	.0008	.0032
%RSD	-1219.	-94.28	17.10	3714.	32.39	-144.4	37.97
#1	-.0051	-.0119	.0048	-.3228	.0620	-.0011	.0107
#2	.0040	-.0596	.0038	.3483	.0389	.0000	.0062

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0014	.0025	.0185	.0061	.0329	.0027	21.45
SDev	.0018	.0023	.0527	.0086	.0384	.0009	.04
%RSD	128.5	94.28	284.9	141.3	116.6	35.36	.1937
#1	.0026	.0041	.0558	.0122	.0058	.0033	21.42
#2	.0001	.0008	-.0188	.0000	.0601	.0020	21.48

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0315	.0940	.0021	.0119
SDev	.0127	.0160	.0000	.0114
%RSD	40.37	16.96	.1635	95.74
#1	.0404	.0828	.0021	.0200
#2	.0225	.1053	.0021	.0039

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Method: ICAP1 Sample Name: CCB-5 Operator: JM
Run Time: 05/14/91 16:00:54
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0111	.0129	-.0311	.0000	.0010	-.0008	.0102
SDev	.0158	.0183	.0110	.0000	.0000	.0007	.0000
%RSD	142.0	141.8	-35.49	.0000	1.805	-77.02	.0423
#1	.0223	.0000	-.0389	.0000	.0010	-.0013	.0102
#2	.0000	.0258	-.0233	.0000	.0010	-.0004	.0102

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0026	.0018	.0000	-.0014	-.0022	.0000	.0000
SDev	.0015	.0051	.005	.0046	.0157	.006	.001
%RSD	-56.28	282.1	-451100.	-329.9	-719.0	-18370.	-430600.
#1	-.0016	-.0018	-.0034	-.0046	.0089	.0048	-.0005
#2	-.0037	.0054	.0034	.0018	-.0132	-.0043	.0005

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0069	-.1310	.0011	-.4529	-.0786	-.0008	.0017
SDev	.0038	.0337	.0023	.2124	.0016	.0019	.0000
%RSD	-55.39	-25.71	213.3	-46.90	-2.080	-228.1	1.952
#1	-.0097	-.1072	-.0006	-.6030	-.0774	-.0021	.0017
#2	-.0042	-.1548	.0027	-.3027	-.0797	.0005	.0017

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0023	-.0016	.0075	.0020	-.0218	.0003	.0890
SDev	.0032	.0058	.0478	.0086	.0153	.0001	.0405
%RSD	-139.6	-353.6	637.7	425.0	-70.16	17.66	45.55
#1	.0000	-.0057	.0413	-.0041	-.0110	.0008	.1177
#2	-.0045	.0025	-.0263	.0081	-.0326	.0003	.0603

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0135	.0857	.0006	-.0008
SDev	.0000	.0569	.0004	.0000
%RSD	.1041	66.02	70.68	-1.202
#1	.0135	.0454	.0002	-.0008
#2	.0135	.1259	.0009	-.0008

000096

Method: ICAP1 Sample Name: ICS Operator: JM
Run Time: 05/14/91 16:05:57
Comment: INT-A1 & INT-B1 (SPEX)
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	494.0	.0692	-.3681	.4685	.4795	.9495	507.9
SDev	2.4	.0403	.0102	.0009	.0037	.0021	4.2
%RSD	.4910	58.29	-2.767	.1853	.7657	.2174	.8179
#1	492.2	.0407	-.3609	.4678	.4769	.9480	504.9
#2	495.7	.0977	-.3753	.4691	.4821	.9510	510.8

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.4631	.4768	.4481	186.4	1.002	510.0	.4650
SDev	.0037	.0025	.0035	1.2	.020	2.1	.0008
%RSD	.8077	.5155	.8533	.6697	2.030	.4204	.1816
#1	.4657	.4750	.4454	185.3	.9874	508.5	.4644
#2	.4605	.4785	.4508	187.2	1.016	511.5	.4656

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	.9003	-.1072	.9412	-1.766	.2685	.4816	.9263
SDev	.0058	.1011	.0051	.247	.0588	.0017	.0037
%RSD	.6481	-94.28	.5404	-13.99	21.91	.3578	.4000
#1	.8962	-.0357	.9376	-1.941	.3101	.4804	.9237
#2	.9044	-.1787	.9447	-1.592	.2269	.4822	.9289

Elem	B	LI	P	MO	SE	SR	SiO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0461	-.0041	.0284	-.0362	.2717	.0146	.2452
SDev	.0062	.0023	.1330	.0031	.0357	.0011	.0115
%RSD	-13.36	-56.37	468.0	-8.655	13.14	7.819	4.688
#1	-.0504	-.0025	-.0636	-.0384	.2465	.0154	.2371
#2	-.0417	-.0057	.1225	-.0340	.2969	.0138	.2534

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0644	.2295	-.0031	.0035
SDev	.0243	.0116	.0007	.0017
%RSD	70.60	5.041	-613.2	47.21
#1	.0172	.2213	.0004	.0047
#2	.0516	.2377	-.0006	.0023

Analysis Report Tue 05-14-91 04:14:42 PM page 1

Method: ICAP1 Sample Name: CCV-6 Operator: JM
Run Time: 05/14/91 16:13:20
Comment: SOLUTION 051491
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	1.056	2.089	2.162	.9851	1.002	1.029	52.60
SDev	.048	.004	.019	.0004	.016	.010	.63
%RSD	4.528	.1714	.8901	.0441	1.604	.9442	1.193
#1	1.090	2.086	2.176	.9854	1.013	1.035	53.04
#2	1.022	2.091	2.149	.9848	.9905	1.022	52.15

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9942	1.043	.9932	1.094	1.044	26.30	1.001
SDev	.0089	.017	.0000	.026	.035	.15	.010
%RSD	.8955	1.593	.0002	2.389	3.382	.5852	.9769
#1	1.001	1.054	.9932	1.112	1.069	26.40	1.008
#2	.9879	1.031	.9932	1.075	1.019	26.19	.9942

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	1.011	50.35	.9982	50.69	46.02	1.019	2.092
SDev	.009	.03	.0050	.88	.13	.011	.026
%RSD	.9000	.0669	.5042	1.745	.2900	1.089	1.221
#1	1.017	50.32	1.002	51.32	46.12	1.027	2.110
#2	1.004	50.37	.9946	50.07	45.93	1.011	2.074

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.9641	.9092	26.91	1.067	1.069	1.004	.1820
SDev	.0225	.0012	.05	.009	.019	.002	.0133
%RSD	2.333	.1272	.1763	.8082	1.766	.2119	7.314
#1	.9800	.9101	26.87	1.073	1.055	1.006	.1914
#2	.9482	.9084	26.94	1.061	1.082	1.003	.1726

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	5.417	10.02	1.003	.8914
SDev	.013	.02	.005	.0044
%RSD	.2354	.1784	.4714	.4904
#1	5.426	10.01	1.006	.8945
#2	5.408	10.03	.9995	.8883

Analysis Report Tue 05-14-91 04:16:53 PM page 1

Method: ICAP1 Sample Name: CCB-6 Operator: JM
Run Time: 05/14/91 16:15:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0254	.0103	.0063	.0000	.0010	-.0005	.0204
SDev	.0181	.0000	.0109	.0000	.0000	.0000	.0072
%RSD	-71.21	.1356	171.8	.0000	1.128	-2.911	35.36
#1	-.0382	.0103	-.0014	.0000	.0010	-.0005	.0153
#2	-.0126	.0103	.0140	.0000	.0010	-.0005	.0255

Elem	CR	CO	CU	FE	PB	MG	MN
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	-.0031	.0000	-.0007	.0365	-.0022	.0145	-.0009
SDev	.0007	.0026	.0000	.0033	.0096	.0315	.0007
%RSD	-23.63	243700.	-.0439	8.951	-432.4	216.7	-71.70
#1	-.0026	-.0018	-.0007	.0388	-.0090	-.0077	-.0004
#2	-.0037	.0018	-.0007	.0342	.0046	.0368	-.0014

Elem	NI	K	AG	NaHi	NaLo	V	ZN
Units	PPM	PPM	PPM	PPM	ppm	PPM	PPM
Avge	-.0060	-.3811	.0005	-.1817	-.0543	.0012	.0006
SDev	.0013	.3874	.0000	.4270	.0294	.0013	.0016
%RSD	-21.99	-101.6	.8186	-235.0	-54.16	111.1	273.9
#1	-.0051	-.6551	.0005	-.4836	-.0751	.0003	.0017
#2	-.0069	-.1072	.0005	.1203	-.0335	.0021	-.0005

Elem	B	LI	P	MO	SE	SR	SIO2
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Avge	.0013	-.0008	-.0971	.0041	.0685	.0002	.0011
SDev	.0048	.0023	.0475	.0000	.0038	.0001	.0000
%RSD	359.9	-282.8	-48.90	.0171	5.594	23.57	2.362
#1	.0047	-.0025	-.0636	.0041	.0658	.0003	.0011
#2	-.0021	.0008	-.1307	.0041	.0712	.0002	.0011

Elem	SN	TL	TI	ZR
Units	PPM	PPM	PPM	PPM
Avge	.0130	.0193	-.0006	.0019
SDev	.0064	.0252	.0004	.0005
%RSD	35.45	130.2	-71.01	28.37
#1	.0085	.0015	-.0003	.0015
#2	.0135	.0371	-.0009	.0023

0000099

METALS PREPARATION LOG

MATRIX: (CIRCLE ONE)
AQUEOUS
SOLID/WASTE
NON-AQUEOUS LIQUID

NOTEBOOK # 16
PAGE# 075

DATE OF PREP 5/15/91
QC LOT # 15:0591G
QC RUN # 15:0591G

ANALYST A Hamerman/SBARNOE

PROJECT DUPLICATES & MATRIX SPIKES: _____ _____ _____

Sample ID	PH 2 (circle one)	Method (circle one)	Initial wt (g)	Final wt (g)	Filtered (circle one)	R'ced in Manal by	COMMENTS
DCS 1	N/A	ICP	1.00	20.00	Y N		
DCS 2	N/A	ICP			Y N		
Prep Blank	N/A	ICP			Y N		
DCS 1	N/A	FAA			Y N		
DCS 2	N/A	FAA			Y N		
Prep Blank	N/A	FAA			Y N		APPEARANCE
V 12057.2	Y N	ICP FAA			Y N		White Fine
MS 2	Y N	ICP FAA			Y N		
DV 2	Y N	ICP FAA			Y N		before after
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		
	Y N	ICP FAA			Y N		

DATE RECEIVED IN MANAL LAB 5/16/91

REVIEWED AND UNDERSTOOD BY:

A Hamerman 5/15/91
ANALYST SIGNATURE DATE

SIGNATURE DATE

0000100